



EMPLOYEES' MAGAZINE

The Union Pacific Coal Company.
Washington Union Coal Company.



1928



LUDWIG VAN BEETHOVEN

*"Shakespeare of the
Realm of Music"
—1770 to 1827*

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THE UNION PACIFIC COAL COMPANY

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Fidelio

Music by Beethoven -- Words by Bouilly

"You can live without art, but not so well."

WE OUGHT surely to consider in these studies the only opera by Beethoven, "the Shakespeare of the realm of music," about whom we always remember his statement concerning the out-of-doors said at a time (Beethoven was born in 1770) when the grandeur of the country was somewhat dimmed by the difficulties and discomforts of living it contained. "No man loves the country more than I. Woods, trees and rocks give the response which man requires. Every tree seems to say, 'Holy, holy.'"

When we consider the number and greatness of Beethoven's compositions, we marvel at his vast accomplishment. "I live only in my music," he wrote, "and no sooner is one thing done than the next is begun. I often work at two or three things at once." Music was his language of expression, and it is through it that we may know him.

The Christmas 1927 number of the Illustrated London News, a rarely beautiful thing of especial interest to the mother of children and to the student of the educational and esthetic value of the beautifully imaginative fantasy, carries a series of colored picture interpretations of certain musical gems. Among these is the artist's picturing of Beethoven's "Moonlight Sonata." It is interesting to recall that this was dedicated to the Countess Julie Guicciardi, whom he described as his "immortal beloved," and whom he had expected to marry. Beethoven's biographers call him homely, but we confess to finding his pictured face full of tremendous charm, fine feeling, purpose, cultivation and nobility. We will consider the story for which he wrote the music, thus giving it place among the undying operas of the world, the story itself being one of the finest we have, telling of fidelity and love, tremendous faith and the quick-witted cleverness of a Portia.

Fidelio

"FOR the—well,—the thousandth time I ask you, Marcellina, will you marry me?"

"But I answer you, No!"

And the pretty girl stamped her foot and tossed her head.

Poor Jacquino, the other party to this courtship, was distressed, but looked nevertheless as if he purposed asking the same question again.

And the scene of this love-making. It surely was not a choice spot. It was a prison yard belonging to a Spanish castle. Marcellina was the jailer's daughter and Jacquino the turnkey. He loved Marcellina, and she used to smile on him. But recently she had, because of an admiration for her father's new assistant, Fidelio, shunned Jacquino.

Should Jacquino accept Marcellina's preference and his own dismissal? But wait, Marcellina is not the heroine of the tale. We must find one.

Marcellina did not know much about Fidelio, the handsome youth she admired, and for whom she showed an open admiration which made Jacquino rage. He was in reality a beautiful and high-born woman, who had disguised herself in order to gain admittance to the prison. For somewhere in the prison was her husband, Florestan, a political prisoner, shut up by the wicked governor, Pizarro.

Leonora (Fidelio's real name) was embarrassed by the open devotion of Marcellina, but, since it gave her freer access to the prison cells, she did not discourage it, even while she sympathized with Jacquino. Rocco, the jailer, also admired the handsome stranger, his assistant, and added to the general embarrassment by showing that he would approve his marriage with Marcellina.

However, Leonora, clinging to the belief that

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Jessie McDiarmid, Editor

her husband was still living and that she might find him in one of the cells, did her best to ignore and use for her own purposes the admiration she'd won as a handsome, somber youth.

From Rocco she heard much of a mysterious prisoner who was confined in the deepest dungeon of all and was treated with ever-increasing severity, his ration of bread and water having been cut down to starvation point. The governor dared not execute him openly, so he plotted his death by starvation, commanding Rocco's help.

Brave and clever Leonora, convinced that this is her husband, schemed how she might yet save him.

She learned that the governor has had a letter from Don Fernando, Minister of the Interior, and the superior of the governor, that he purposes visiting the prison. He has heard complaints of the undue severity with which political prisoners are treated. The governor, cowardly, subservient like all abusive persons, is thrown into a panic lest the minister find the almost starved Florestan. He resolves to make an end of him before the inspection, removing all traces of his having been a prisoner there. Leonora overhears him commanding Rocco to make away with Florestan and hears, too, old Rocco's refusal. Rocco offers to dig the grave, but insists that the governor, if he wishes murder done, do it himself; then adds that his assistant, Fidelio (Leonora), must help him.

Near the prison were the ruins of a long unused cistern now choked with rubbish, in which the wicked and now frantic governor has decided to conceal the body of his victim in a grave. Leonora was helping Rocco and paused in her toil long enough to recognize in the wasted, starved, and only half-alive victim, her husband. She slipped up and gave him bread and wine, quieting Rocco's protests.

"It's against the governor's orders," said Rocco.

"But he's dying," said Leonora, hiding her own distress.

Pizarro, the governor, eager to be rid of his enemy, and fearing every moment to hear the signal announcing the approach of Don Fernando, advances to his victim. He is about to strike when Leonora, the supposed Fidelio, rushes between them.

"First kill his wife!" she said, taking her stand beside her weakened husband.

"He shall die. Stand aside," said the enraged governor.

But Leonora was prepared. Instantly she covered him with a pistol and this, together with his confusion completely routed the governor.

At the same moment a trumpet call was heard from the battlements.

"The Minister! The Minister!"

After a hasty investigation of the true state of affairs Don Fernando soon brought things to a happy issue; the villainous governor was led away to receive his just punishment and Florestan, in

whom the minister recognizes an old friend, was at once set free, his wife being commanded to strike off her husband's shackles.

The prisoners were released and there was general rejoicing. Everybody sang the praises of Leonora—well named "Fidelio."

In the midst of the joy Jacquino found the dazed Marcellina who could not help but respond as "Fidelio" smiled her blessing from her position beside her husband.

"For the thousandth and first time!"

Run of the Mine

Two Explosions In Illinois

ON DECEMBER 20th an explosion costing the lives of seven mine workers occurred at Mine No. 1 of the Cosgrove-Meehan Coal Company at Stiritz, Illinois. The coroner's jury impanelled to pass upon the death of the seven men deferred rendering a verdict pending the work of investigation conducted by Director A. D. Lewis of the Illinois Department of Mines. After receiving the report of his investigators, Mr. Lewis is quoted as saying that "any one of a dozen different causes may have caused the explosion," the investigators' report, including five specific recommendations, reading as follows:

"1. That motor haulage rails be kept well bonded at all times.

"2. That the mining company exercise precaution in preventing the taking of matches or any smoking material into the mine.

"3. That a recording pressure gauge be kept at all times in constant operation with the ventilating fan.

"4. That all mine examiners, after examining their allotted territory, come to the top of the mine and record their findings in the examiner's book before the men be allowed to go into the mine, as required by state mining law.

"5. That ventilation be increased in the fifth and sixth east off the first north, to take care of the unusual condition which exists in this pair of entries."

The investigators expressed the opinion that any of the five factors above mentioned might have contributed to the disaster, several loose rail bonds said to have been found in the explosion area.

From the fact that no recording pressure gauge was employed in connection with the fan operation, disarrangement of the mine ventilation was also considered as a possible cause. It also developed that the mine examiners did not come to the top to record their findings before the men were allowed to enter the mine.

The second explosion occurred in Peabody Coal Company Mine No. 18, near West Frankfort, Illinois, just after 600 men entered the mine on Monday, January 9th. In this accident twenty-one

men lost their lives and three more were injured. Mine No. 18 was originally developed by the Dering Coal Company and has the reputation of being a gassy mine. The explosion occurred in the northeast section of the mine, about one mile from the shaft bottom. One hundred men were employed in that portion of the mine. That the explosion originated from the ignition of gas there can be little doubt, the lighting of a match by a cigarette smoker, and the possible ignition by an arc from a coal-cutting machine suggested as creating the explosion.

Both the Cosgrove-Meehan and the Peabody Companies' mines are listed as being rock dusted, which doubtless accounts for the failure of the two explosions to become wide-spread, with the possible destruction of many additional lives. Orders have been issued to search every man entering the Stiritz Mine for matches. Both mines are said to have been equipped with electric cap lamps.

Winters Just as Cold as Ever

Mr. M. W. Hayes, meteorologist and head of the St. Louis Weather Bureau, says that the terrible winters of past and gone years, with well-remembered sleigh bells and snow drifts that covered the fences, have their counterparts today. The weather, while subject to annual variations, is growing as a whole neither warmer nor colder.

"One of the coldest years on record, for example," Hayes said, "was 1917-1918. That seemed to be the end of a cycle of severe winters which began in 1913. But there is no way of foretelling when such spells will occur and no explanation for their appearance. At present we are in the midst of a mild period. Taking the average for any given number of years, you find that conditions now are identical with those on record."

What, then, is the explanation of the delusion that persists in the adult mind in spite of argument and statistics? "Primarily," said Hayes, "in the tendency to mistake the unusual for the usual, because the impression it makes on the mind is stronger."

"Quite naturally, a child remembers making his way to school through snow which seemed mountain-high. Just as naturally, the weeks in every winter which presented no such thrilling experience went by unnoticed."

"Much of the fiction which clings in our minds about the old-fashioned snowy Thanksgiving and the rest of it is to be attributed, I believe, to the fact that so much of our school literature came out of New England. In this part of the country we never have a snowy Thanksgiving, but we believe in it just the same, because we read about it in McGuffey's First Reader."

"Another thing which causes us to believe that winters are milder now than they used to be is the difference in living conditions. Nowadays we

go to our comfortable offices and schools from nice, warm homes, and when the temperature is zero we hardly realize that it actually is winter. Thirty or forty years ago we would have had to get up in the morning and build the fire.

"We ride in heated street cars, and if the service isn't just up to what we think it should be, there is a heated taxi to jump into. No wonder we think winters aren't what they used to be."

"As a matter of fact, there have been great changes of climate, but only over geological periods of such immensity that a guess as to their length which comes within 100,000 years of accuracy is a good one."

"Within the memory of any living person, winter now is precisely as cold, as snowy or as mild as it always has been."

We are too close to the present situation to think of it very seriously, and some of our fair maidens who love the sheen of silk hose and slippers had better look out. Some good woolen undies and a pair of galoshes are not bad fixings to keep on tap. King Boreas is by no means off the job yet.

Coal and Oil Production In 1927

THE year just closed shows a sharp falling off in coal production, both bituminous and anthracite, the annual output of all bituminous and lignite mines for six years shown below:

Calendar Year	Production, Tons	Average per Working Day
1922.....	422,268,000	1,379,000
1923.....	564,565,000	1,845,000
1924.....	483,687,000	1,573,000
1925.....	520,053,000	1,692,000
1926.....	573,367,000	1,864,000
1927.....	519,762,000	1,690,000

The figures for 1927 (a preliminary estimate) show a falling off from the year 1926 of 53,605,000 tons, or in excess of 9 per cent.

The total production of anthracite for 1927 is now estimated at 80,650,000 tons, as compared with 85,000,000 tons produced in 1926.

The production of crude oil in 1927, based on preliminary estimates, has been fixed at 895,000,000 barrels, or about 120,000,000 barrels in excess of the 1926 production of 775,561,275. The Seminole, Oklahoma, field alone produced 134,000,000 barrels, or 15 per cent of the nation's total in 1927.

What 1928 holds for the coal industry it is hard to predict, the stocks of bituminous coal in storage piles reaching, as of October 1, 1927, a total of 61,900,000 tons, a figure exceeded but three times, Armistice Day, 1918, with 63,000,000 tons; April 1, 1927, with 75,000,000 tons, and July 1, 1927, with 63,400,000 tons. The production curve for

soft coal for 1927 shows remarkable uniformity; in substance, it represents the most uniform rate of production yet plotted by the Bureau of Mines, the suspension in the Central Competitive Field having no apparent effect on production. As a matter of fact, the reduction in storage stocks of 11,600,000 tons from April 1st to October 1st was more than offset by the extraordinary shipments through the Lake Erie ports, totaling 34,267,825 tons, a movement exceeding that of the previous year by 4,604,707 tons. It is reasonable to presume that the 1928 production will approximate that of the year just closed.

As this resume is being written the figures covering safety expenditures for 1927 are not yet available, but such will not differ materially from 1926. **No safety expenditure that any official or inspector, whether Federal, State, Company or joint employe and Company, has recommended has been denied.** With this situation clear, it is proper to examine the relative methods employed in mining in 1927 as compared with former years. The only material change that has taken place lies in the direction of a greater percentage of coal loaded mechanically; the record for the entire period of mechanical loading as follows:

The Accident Record for 1927

WE WENT BACKWARD. SUCH ARE THE FACTS, EXAMINE THEM AS WE MAY. During the year which just closed, seven fatal accidents occurred in our Wyoming mines and one in our Tono mine. The details of the eight deaths as set forth below invite serious study.

Year	Per Cent Loaded	
	By Hand	Mechanically
1920.....	98.34	1.66
1921.....	97.89	2.11
1922.....	97.96	2.04
1923.....	96.68	3.32
1924.....	94.29	5.71
1925.....	90.45	9.55
1926.....	78.33	21.67
1927.....	59.80	40.20

IN WYOMING

1927	Occupation	Age	Dependents	Nature of Accident
March 11th	Timberman	29	4	Fall of roof.
June 22nd	Miner	52	0	Fall of face coal.
July 5th	Rope runner	27	0	Killed under trip.
August 10th	Loader	46	3	Riding loaded trip in violation of laws and rules.
September 3rd	Miner	40	0	Embolism following fracture of leg.
November 18th	Asst. Foreman	40	7	Drowned.
November 18th	Miner	28	0	Crushed and drowned.

AT TONO

May 12th	Miner	52	1	Fall of face coal.
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When computed on a man-shift basis, the record shows one death for each 64,589 man-shifts in Wyoming and 34,710 man-shifts in the Tono mine. As man-shift records have been kept in Wyoming for the past three years, the following comparison will prove of interest:

Calendar Year	1925	1926	1927
Shifts worked ...	479,130	485,987	452,125
Fatalities	6	8	7
Shifts per fatality.	79,855	60,748	64,589
Ratio, per cent.	100	76	80
Tons coal mined..	2,779,065	2,776,245	2,750,430
Fatalities per million tons mined.	2.16	2.88	2.54
Ratio, per cent.	100	133	117

The record for both 1926 and 1927, whether measured in man-shifts per fatality or fatalities per million tons of coal mined, shows poorer results than were obtained for the year 1925. Tono mine worked 34,147 man-shifts in 1926 without a fatal accident, with one fatality in 1927 for 34,710 man-shifts worked.

It will prove interesting to know that but one man has been killed at a mechanical loader face during the eight years during which machines of various types have loaded 2,403,752 tons, the man whose life was lost killed by a roof fall some hours after the loading process had stopped for the day. Our eight years' experience with loaders should suffice to justify the belief that **properly safeguarded mechanical loading is safer than hand loading, and it is on this theory that we say our 1927 safety performance moved in the wrong direction.**

The eight men who were killed showed an average age of thirty-nine years; assuming seventy years as the age of retirement, the eight men had a possible combined working period of two hundred and forty-six years ahead of them when they died. What is equally tragic, a total of fifteen dependents were left behind.

A careful study of these eight accidents develops that but two can well be classed as unavoidable, that of the rope runner and the man who after suffering the fracture of his leg died from

embolism, a clot of blood from the wound carried by the circulatory system into the heart or the brain. The remaining six deaths were distinctly avoidable, and in certain instances death was due wholly to a flagrant disregard of the mining law and the ordinary rules that govern mine safety.

The last fatal accident, which cost the lives of two men, creating seven of the fifteen dependents, was the first occurring in years where two or more men were killed in one accident. The task involved was in no sense an extraordinary one, involving, as it did, the location and handling of a volume of water estimated at 50,000 gallons, or five railroad tank car loads. No element of the unexpected entered into the situation, the problem had been up for a year, it was talked about, anticipated; yet the methods employed showed a total disregard of all coal mining tradition, the Company's safety rules and the state mining law. The failure was a sheer man failure, not one man, not mine workers, but those who should and did know what was required and what should have been done.

No greater truth touching on coal mine safety has been uttered than that contained in the statement set forth in connection with an article on "The Coal Mine Fatality Rate," by Mr. Scott Turner, Director, U. S. Bureau of Mines, page 15, "Coal Age," January, 1928, issue, which reads:

"The mine operator should place the careless worker and the non-producer in the same category, and allow neither to remain in the mine. Failure to exclude the careless worker indicates carelessness on the part of the company. In case of accident under such circumstances, the chief responsibility is upon the company. We must look to operating companies to produce two commodities, namely, safety and tonnage. The production of either without the other is economic waste. Companies that will not tolerate a careless employe are the real contributors to the safety movement in the coal-mining industry."

Emotionalism Rather Than Reason

WHETHER the American people are drifting is rapidly becoming more than a mere academic question. The columns of our daily papers teem with stories of abductions, hideous murder, robbery, theft, arson—every crime in the calendar, carried out not hesitatingly, but frequently in broad open daylight. The Hickman atrocity only yielded second place to the Snyder-Gray execution, for a brief period, while in the meantime numerous other unspeakable crimes are being committed daily.

A few days ago a moron past middle life snatched an infant of thirteen months out of its carriage, the child thrown into a snowbank in a Chicago public park after its face and body had been beaten indescribably. Thereafter another five-

year-old girl was picked up at noonday as she walked toward and in plain sight of her mother from the child's kindergarten school, thrust into a shabby automobile, carried to a secluded place, where her little body was afterward found, cut, hacked and dismembered by a fiend incarnate whose diseased mind ran red. Again, we read of an American girl who seeks to become the third wife of an oriental whose life has been of such character that even native India revolted against him. All of which leads us to ask, "What price education and freedom?"

There is now no crime so degrading or unspeakable but an army of sobsters, male and female, appear, pleading clemency, sending, in many cases, flowers, books or extravagantly prepared meals to the criminal, while the victim, or his or her sorrowing relatives and friends, are left wondering perhaps what their five or their twelve-year-old child could have done to invite the crime visited on their weak and quivering bodies, while attention and sympathy is poured out on the criminal. Again, no crime, however atrocious, is committed without at least one and frequently several members of the legal profession appearing, prepared to go to any limit to mitigate or if possible eliminate entirely every element of the punishment that the law calls for and that justice demands should be applied to the criminal.

Our criminal situation has now arrived at the point where criminals approach jurors in open court, and a creature who brutally shot down his cowering, cringing, pleading wife in broad daylight was recently allowed to plead his own case, his strategy, that of attempting to submerge a struggling prosecuting attorney in an avalanche of scurrilous and obscene abuse, all representing a studied plan to substitute a finding of lunacy on the part of the jury for the capital punishment he richly deserved, the expedient proving successful.

Two hopeful things have recently risen out of and above the miasmatic morass that seemingly envelops the American people. In one case the Governor of a great State said "No" in unhesitating tones to an appeal made to stay the just and lawful execution of a wife and mother, whose pace eventually led to the brutal murder of her sleeping husband, the father of her nine-year-old girl child. In the second instance, the chief of police of the city in which the five-year-old child was murdered and dismembered invited the club women of the city to look on that pitiful little lump of clay, cut and hacked out of all human semblance, this request made to forestall the deluge of maudlin sympathy that invariably accompanies the commission of bestial crimes.

The advertising columns of our daily press are loaded with announcements of new models of automobiles, with sweeping reductions in the price of nearly all machines. This means that several

million additional Americans, old and young, are to be drafted into the ranks of drivers within the next few months. Some genius once said that even the weakest of us could stand poverty and deprivation, but only a few could stand power and affluence. The automobile is the personification of power and speed; it is a dangerous projectile when hurtled through busy streets and along county roads. Our country today has hundreds of thousands of veritable "beggars on horseback," driving here and there, demoniacally, and without regard for those who have equal rights to the streets.

In one of our Eastern cities no less than twelve children were overridden, crushed, maimed and killed in the first week in January, the chief of police swearing in 800 citizens as special officers, eighteen thousand dollars in fines collected in one day. This situation represents but another reflex of the tolerant attitude the whole American people take toward law-breaking. Mrs. Liberty has become Mrs. License, and she is traveling fast.

A few evenings gone we enjoyed the privilege of viewing some moving pictures taken in Rome by a friend. The Coliseum was shown, and the gateway through which the lions entered the arena long ago to destroy the Christian martyrs flashed across the screen. Today every cross street is an entrance through which a Ford, Packard, Lincoln or Dodge lion may get its Christian, perhaps one of tender years. The year 1928 will show new and higher records of dead and maimed.

What the U. S. A. wants is the suspension of all pardons, paroles and reprieves, with the unremitting and remorseless use of the electric chair and the gallows for all legally-proven cases of capital crime for even one year, after which legal executions will substantially cease for want of material. Our lawyers and medical men have now reduced insanity to that fine point where a criminal may be too insane to prosecute today and too sane to commit to an asylum tomorrow. It is high time for all good men to come to the aid, not of the party, but of civilization itself. Emotionalism has supplanted logic and reason in the minds of the people. Our government is becoming a government of emotionalists.

Saving Fuel

It takes about one and one-half tons of bituminous coal to rebuild a working fire in the average locomotive, after the fire is knocked out. To reduce this loss of fuel, one of our western railroads has arranged to work its yard engines three continuous shifts of eight hours each, the engines being only cut out of service for boiler washing and necessary repairs. As fast as the number of coal mines can be reduced, double and triple shifting should be inaugurated, reducing mining costs through reduced expenditures for capital, taxation and idle time deterioration. When this is done

the oft-referred-to Jacksonville scale will prove less formidable and wage payments can be substituted for inefficiencies.

Send in Your Magazine Contributions and Pictures

Again we want to remind everybody that this magazine belongs to all of us. In it we want to share each other's interests and joys and sorrows; each other's studies and ambitions; to consider the things that make for broad thinking and have cultural value. We want to learn more about our own task, and more, too, about the tasks of our fellow workmen, because so often it is the other part of our task and we need to understand it in order to understand our own. Then we want to know something about our industry in other parts of the country and in other countries. And we do enjoy getting the news about the folks in the other towns because so many of us have close friends and relatives in the near-by towns.

To this end then we are always happy to have contributions of general or local interest, pictures of children, pictures of Old Timers and others. And just a word about the kind of pictures we can use. They should be as clear as possible and should have the name of the subject written on the back, together with the address to which it is to be returned.

There is a correspondent in each town who is glad to forward contributions, or they may be sent direct to the magazine office at Rock Springs.

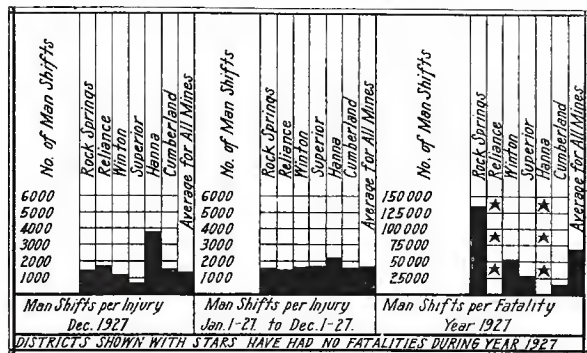
From Far Off India

Mr. S. W. Farnham, Consulting Engineer, Goodman Manufacturing Company, Chicago, who has traveled through many foreign countries, recently received a card of greeting from Mr. D. M. Madan, of the Tata Iron and Steel Company, Ltd., Bombay, India, which carries so much of the fraternal spirit that should actuate all men, that we take pleasure in reproducing same in the Employees Magazine. The card reads:

"As the calendar begins to run out, and the season of good will approaches, I recollect the immense debt of 'good will' that I incurred this year during my travels abroad, when I received everywhere uniform help and courtesy, willing assistance and sympathy, and the most cordial guidance and affectionate cooperation, in my endeavour to see and study things, from many new friends, in many lands. In grateful appreciation of the numerous acts of kindness extended to me, I do offer my best wishes to all; and in forwarding the message of good wishes to you, I recognize that I am not fully discharging the debt I owe you, and which I cannot adequately repay. May the Lord of all make it possible within the coming year for East and West, for all humanity, to join closer together in that bond of union and friendship which I saw readily offered to me in my peregrinations round the world, as I wish you and yours a Merry Christmas and Happy New Year."

Make It Safe

December Accident Graph



The above presents the last graph for the year 1927, somewhat battered and worn, and differing somewhat from its initial appearance twelve months ago. Of the six districts, but two—Reliance and Hanna—finished the year without a fatality, all the rest losing their stars, as the usual sniping process took the lives one by one.

While the number of deaths for 1927 was one less than in 1926, our fatality rate leaves much to be desired. On a tonnage basis (a poor method of compilation, but used here as it is accepted by the Bureau of Mines), The Union Pacific Coal Company produced slightly over 2,750,000 tons of coal during 1927. With seven deaths resulting from mining operations, our fatality rate is 2.63 deaths per million tons. This is slightly less than the average for the United States, which usually is about 3.75 per million. We are not satisfied, though, with being a little better than the average, as with our conditions we should do far better.

From a non-fatal standpoint, 1927 was not quite as successful as 1926. With a decrease in manshifts, the number of injuries increased from 254 to 267, consequently our rate of manshifts per injury is lower. For 1927 the average for all districts was 1,670, compared with 1,931 for 1926.

1927 is gone—1926 is history, and we are now starting in 1928. The lives lost in the past are gone forever, but we can do something to conserve the health and lives of our employes during the present year. A certain number of injuries—comparatively few—are unavoidable, and the industry will always be faced with, and must bear, these accidents. It is the purely avoidable accidents, the ones caused by carelessness and thoughtlessness, that we must avoid.

Let us resolve then during the present year to think just a little more safety, and when 1928 is past to have a maximum number of districts with their record unblemished, and each with its original quota of stars.

Hanna Wins Pennant and Books

THREE years ago, when it was first announced that prizes would be given to the districts showing the best safety records, Cumberland was taking all the prizes, with no other district, seemingly, having a chance. At that time Hanna was usually found in the last place, and were apparently strongly fortified as "cellar champions."

They were not satisfied, however, with last place and slowly but surely started climbing toward the top.

With the close of the year 1927, compilation of figures shows that Hanna won everything that was in sight and, according to reports, they are, like the famous Alexander, looking for more worlds to conquer. They not only won the pennant for the six months and the books, offered for the largest percentage of gain over the previous period, but they have also won a gold watch for completing the year without a fatality, and each of the mine foremen receives a gold medal for the same reason.

To win the pennant, Hanna averaged 2,251 man shifts for each accident reported. Cumberland was second, with 1,955, and Winton third, with 1,819. Rock Springs, Superior and Reliance followed in the order named. While Hanna's record was not quite equal to the previous period, when Reliance won the pennant with 2,574 man shifts per accident, their mark is very good and well up with the standards set in previous competition.

By showing an increase in man shifts per accident of 44½ per cent over their previous figure, Hanna won the 100 volumes of fiction for their local library. As a whole, the results for the past six months were not as good as was to be expected, only three districts showing increases, and the total for all districts showing a decrease of 8.1 per cent. Hanna, with an increase of 44.5, led; Winton, with an increase of 9.8 per cent, was second, and Cumberland was third, with a 3 per cent increase.

Hanna has made a record to which they may point with justifiable pride. Their conditions, with steep pitches and high coal, tend to make their conditions more hazardous than any field (with the possible exception of Cumberland) that The Union Pacific Coal Company is operating. Their fine record is not the result of haphazard luck or chance, but has been obtained by each individual thinking just a little bit more of his own safety and avoiding the taking of an unnecessary chance.

Winners of the Watches

An early 1927 issue of the magazine contained an editorial announcement to the effect that each district completing the year without a fatality would be given a gold watch; this watch to be awarded the individual within the district who had done the most toward the promotion of safety during the year. In order to equalize between the larger and smaller producing districts, a watch was also offered to a district when 500,000 tons of coal was produced without a fatal accident.

Until March 11th, all six districts were without a death. On this date Rock Springs had the first fatal accident of the year. However, they went the balance of the year without a death, producing in the meantime over 700,000 tons and thereby became eligible to receive one of the watches.

One by one all districts were eliminated except Hanna and Reliance, neither of which had a death due to mining operations. This, by the way, was the second successive year that Hanna has had no fatal accident, winning the only watch in the U. P. system for 1926.

In order to place these watches in the hands of the individuals, nominations were called for in each place and later the candidates were voted upon. When ballots were counted it was found that at Rock Springs Thomas Brawley, a driver in No. 4 Mine, was the winner.

At Hanna Andy Hyvonen, and at Reliance, H. M.

Kelley were deemed by their fellow workmen to have done the most towards furthering safety and first aid ideals.

These three men are to be congratulated. They have each been actively engaged in safety work and have received a signal honor at the hands of the men who know them best, when by their ballots they were named as worthy of the prize.

Electric Detonator in Railroad Car Injures Three Workmen

As the mine foreman, safety patrolman or other examining officials travel through the mine on their regular duties, it is oftentimes necessary to call the attention of the miners to irregularities in their handling of powder and detonators. Their detonators may not be properly stored in a prepared hole in the rib, powder may be stored in the same box with metallic substances or there may be other violations noticed by the inspector.

This quite often is resented, more or less, by the man at the face and he considers the officials' remarks as "just something else to crab about."

A forcible example of cause and effect was recently brought out. The cause—the careless handling of an electric detonator by some employe at Reliance; the effect—three men in a hospital at Omaha, nearly a thousand miles away.

While three men were unloading a car of lump coal in the Omaha yards, one of them noticed a "pretty little red thing" on the end of a wire, among the coal. With probably a hazy idea that their find was something akin to a firecracker, one of the men lit a match and held it in the flame.

To anyone familiar with electric detonators it is unnecessary to detail the results. For the benefit of the uninitiated will state, however, that the one holding the cap lost several fingers and the two nearby onlookers were so injured that hospital treatment was necessary.

We must overlook the carelessness of the men who found it, as theirs was a carelessness born of ignorance. To the man who carelessly left his detonator lying around, to be loaded by himself, or probably another, months later, we must attach the blame.

Detonators and caps contain fulminate of mercury, the most powerful explosive known. Weight for weight, they contain more power and potentiality for destruction than any other object. They are dangerous in proportion to their size and weight. For this reason we cannot impress upon employes too strongly the necessity for the utmost care in their handling, not only for their own sakes, but for the sake of the men who must follow up their work.

They should always be kept in a secure niche in the solid coal, well away from the powder, and so located that there is no possibility of losing one. In making up charges, remove only the exact number of detonators for the charges, and using extreme care that a detonator never becomes carried with slack or coal.

Remember that your carelessness may cost a useful life a thousand miles away.

Mine Ventilation from the Engineering Standpoint

Abstract from lecture delivered by Prof. Henry Briggs of the University of London at the Royal School of Mines, South Kensington, England.

AFTER stressing the importance of ventilation to the miner and mining engineering, the professor dealt with its cost in British collieries, illustrating his remarks by a number of striking figures. Mine fans moving air

quantities exceeding 250,000 cu. ft. per min. were becoming increasingly common. The two largest installations of the kind were the Walker fan at Modderfontein, Transvaal, which was designed for 900,000 and could move 1,000,000 cu. ft. of air per min., and a fan at Gladbeck, Prussia, rated at 710,000 cu. ft. and consuming 2,140 h. p. The mere weight of air circulated by large fans was enormous; in some collieries the daily air-tonnage exceeded the coal-tonnage by 10 or 12 to 1. The average ratio of air to coal on the weight basis was about 6 to 1. Some 80,000,000 cu. ft. of air per min. was in continuous movement in British mines, and the annual bill for ventilation was but little short of 2,000,000 pounds (\$9,720,000) per annum, or 2d. (4 cents) per ton. The average price of air current was 25 pounds (\$125) a year for every 1,000 cu. ft. per min. The annual ventilation bill at some collieries reached 10,000 pounds (\$48,600). Two methods of lessening the cost of ventilation received special consideration, namely, (1) diminishing the frictional resistance by better proportionment between the sectional area of roadways and the quantity of air passing along them, and by providing the roads with smooth linings; and (2) reducing the leakage of air at the mouths of upcasts and between intakes and returns underground. A great deal of attention had been paid to fan efficiencies and far too little to the efficiency of distributing the air in the mines. To the engineer, the real criterion of mine ventilation was the cost per unit volume of the air which actually reached the workers below the ground. It was obviously of little advantage to have an efficient surface plant if the greater part of the air was lost by leakage. Surface leakage might cost a mining company 1,000 pounds (\$4,860) a year in power alone, without considering the higher capital cost of the fan and motor because of that leakage.

The lecturer then described some modern air-lock systems for upcast shafts. By their use, surface leakage was brought down to entirely negligible proportions. In reviewing the causes of air leakage underground, the extraordinary porosity of a cracked and fissured sandstone roof was commented on, some valuable figures in that regard having recently been obtained during unwatering operations at Montagu colliery. There was much need for walls, especially where the roof was still under movement. The speaker made a strong plea for the appointment of ventilation engineers at important mines, quoting cases where such appointments had been unqualified successes. The managers and others had their statutory duties in regard to ventilation, but the firm hand of expert control was only too often wanting. In a matter that was everybody's business, and no one's care in particular, the spirit of "good enough" held too much sway.

December Accidents

For December, 1927, there were thirty-three injuries reported from the six mining districts. While space prevents the listing of all of these, below are a few of the more typical:

Electrician's Assistant—While repairing electric light on Joy loader, socket exploded and his hand was burned.

Miner—Was pulling down coal from pile at face. A piece of coal rolled from the pile, bruising foot.

Miner—Was lifting on a car that was derailed, straining himself and causing a hernia.

Miner—A "bump" caused coal to fly from the rib, striking him and fracturing leg.

Miner—While working at room chute, a piece of coal fell from rib, striking foot and bruising it.

Loader—Was lifting a piece of coal into car. The piece broke and his hand was caught against top of car, bruising thumb.

Miner—Was struck on foot and bruised by small fall of loose top coal.

(Please turn to page 58)

Questions and Answers for Mine Foreman and Fire Boss Certificates

(Continued from last month.)

Ques. 1—(a) How would you deal with a 'gob fire that had attained considerable headway?

Ans. A gob fire that has attained considerable headway should be carefully and thoroughly sealed to prevent, if possible, the access of fresh air to the fire. The portion of the mine may be sealed by any form of air-tight stopping. The work of sealing should begin at the return end and proceed regularly toward the intake in order to avoid the liability of explosion due to the accumulation of an explosive body of gas in the region of the fire. It is not always possible to extinguish a gob fire by sealing alone; carbon dioxide has been pumped into the sealings with good effect. If this fails, recourse is usually had to flooding the mine, or that portion of the workings where the fire is located, when this can be accomplished by the building of a mine dam.

(b) What are the dangers usually encountered on entering a mine after an explosion, and how would you proceed to overcome them? Explain fully.

The chief danger lies in the presence, in the mine air, of the afterdamp produced by the explosion. The afterdamp is particularly dangerous when it contains a considerable percentage of carbon monoxide, which permits the light to burn brightly, but is extremely poisonous to the human system. The force of the explosion has often destroyed the doors, stoppings, brattices, etc., cutting off the circulation of the air in the mine and preventing any advance being made until these are repaired. The mine passages are also frequently blocked by falls of roof that render the penetration of the workings exceedingly dangerous. There is generally the danger also of other explosions occurring from the ignition of bodies of gas set free by the falls of roof just mentioned. It is unsafe to explore the mine after an explosion with any but safety lamps properly examined and tested. Each of the rescuing party should be provided with such a lamp; the party should be divided into two divisions, the smaller division to penetrate the entries as far as possible, never going beyond the air, however, to examine the conditions of the workings, while the larger division is engaged in making the necessary repairs to restore and increase if possible the circulation of the mine. The entrance of the mine must be made on the intake air, after having examined the ventilating machinery to see that the same is still in working order. Only experienced men should be chosen from the volunteers offering themselves for the undertaking. Each body of men entering the mine should be in charge of a thoroughly competent person.

Ques. 2—(a) In what part of a mine may gas be expected to be given off more freely than in other parts, and why?

Ans. Marsh gas is given off more freely at the working face, owing to the constant exposure of fresh faces of coal as the work advances. When this gas is contained in the roof, larger quantities are set free in pillar workings and on falls, owing to the disturbance of the roof setting the gas free. A squeeze or crush in a gaseous seam is almost invariably accompanied by a large outflow of gas into the workings. Carbon dioxide is given off in larger quantities from abandoned workings, especially where water has accumulated. Gob fires are accompanied by a production of large quantities of carbon dioxide and carbon monoxide gases. Mine gases do not necessarily accumulate where they are given off; the lighter gases rise into the higher portions, or upper workings of the mine, where they accumulate unless the circulation is sufficient to carry them away; the heavier gases gravitate to the lower workings of the mine, where they accumulate until removed by the air current.

(b) How are gases caused to expand out of the strata,

and at times to overflow the workings in a mine?

By being liberated by a shot in blasting or by any accident suspending the ventilating power when the blowing system is in use, or by a short-circuiting of the air, caused by an open door or broken brattice, and lowering the water gauge or pressure. Under such conditions, gases expand and flow out of crevices, gobs and other places containing standing gas, into the workings. This lowering of the water gauge is a feature that must be carefully guarded against in gassy mines using a blower fan. With a suction fan, the opposite effect would result from the stopping of the fan. When the barometer shows a low or lowering pressure, great care should be taken, as the gases at such times expand and pass out of the crevices, etc., into the mine workings, and an efficient current of air is then required to dilute and carry them off.

Ques. 3. What precautions should be taken in entering an abandoned mine?

Ans. The precautions necessary to be taken in entering an abandoned mine relate particularly to the condition of the mine with respect to gases. The presence of blackdamp or carbon dioxide, or whitedamp or carbon monoxide and marsh gas or firedamp forms the chief danger. The danger is greater when there is little circulation of air in the old workings, and especially if there is a tendency to gob fires in the mine, since in such cases there will be a larger amount of whitedamp given off. The presence of whitedamp is often not readily detected when entering an abandoned working place, since the lamps continue to burn brightly in this gas. The effect of the gas on life is deadly, as it poisons the system, producing unconsciousness and death in a comparatively short time.

Ques. 4. When are gobs most dangerous?

Ans. The gobs of the mine become most dangerous when they are not thoroughly ventilated, thus furnishing a place for the accumulation of standing bodies of gas, and when gas occurs in the roof and is set free in large quantities by roof falls. The gobs are also dangerous when, on account of the storage of the fine coal and slack in the waste, gob fires are a frequent occurrence. Some coals have a greater tendency to heat and fire when stored in the gob than others. Gobs may also be considered dangerous when they are full of standing timber and the roof is strong. An undue pressure is thereby thrown on the entry pillars and stumps that may induce creep. All standing timber should be removed from abandoned workings so as to induce a fall of roof.

Ques. 5. What constitutes a good safety lamp?

Ans. A good safety lamp for general work must give a good light, be safe in strong currents of air, must not be too sensitive to gas, and should be provided with a good lock fastening and a lighting appliance by which the lamp may be relighted without opening, when extinguished. The lamp should be self-extinguishing in an explosive atmosphere. It should be simple in construction and easily taken apart and cleaned, and as light in weight as is permissible for the required strength. A good lamp for testing should be sensitive to the presence of small percentages of gas, should maintain a uniform flame, and should have a free admittance of air at a point below the flame. All safety lamps should have a good picker by which the wick can be cleaned when necessary.

Ques. 6. Name and describe three safety lamps now in use. State which lamp you consider the best and safest, and why. In what does their safety consist?

Ans. Davy, Clanny, Mueseler.

The Davy lamp is the best lamp for making an exami-

nation for gas, as it is more sensitive to gas than any other lamp. The flame of this lamp is surrounded by a cylinder of gauze, having no glass; the lamp gives a poor light. The Clanny lamp has a glass surrounding the flame, and is better suited for general work, as it gives more light than the Davy lamp. The Mueseler lamp is the best of these three lamps for use in strong air currents; the gauze is bonneted or protected, so as to prevent the flame from being blown through the gauze; the air is admitted through a gauze ring over the glass, and the products of combustion pass up through a funnel-shaped chimney enclosed inside of the gauze and pass out at the top.

All safety lamps depend on the principle explained, namely, the isolation of the flame by wire gauze; but this principle affords protection only when the lamp is properly handled by an intelligent person.

Ques. 7. What instructions would you give the workmen in the use of safety lamps, and what precautions would you take in the distribution of lamp keys within the mine?

Ans. No person may be entrusted with a safety lamp until he has given satisfactory evidence to the mine foreman that he understands its proper use and the danger of tampering with the same. The person receiving the lamp should be instructed to carry it erect, so that its flame will not touch the gauze, and to be careful not to expose the lamp to a strong current of air, or to break the glass or injure the gauze. In no case must he tamper with the lamp or attempt to relight it when extinguished; he must avoid placing the lamp in a position where the gauze can become clogged with dust; he must maintain a normal flame in the lamp; and when gas is observed in the lamp, he must carefully withdraw to fresh air. Lamp keys should be given only to persons duly authorized by law to receive them.

Ques. 8. What dangers may arise from the improper care and handling of safety lamps by the workmen?

Ans. There is danger of the gauze becoming dirty or clogged with dust, which would render it more liable to pass the flame. A lamp exposed carelessly to a strong air current may have its flame blown through the gauze. When the lamp is not held in an erect position, the gauze may become heated and pass the flame. The glass of the lamp may be cracked by too large a flame, or by water dropping from the roof. The greatest danger exists when the lamp is brought in contact with a body of gas, unless the person handling the lamp has the presence of mind to remove it from the gas promptly, and carefully avoid any quick motion.

Ques. 9. Describe the action of the flame of a lamp in a mixture of air and CH_4 and also in a mixture of air and CO_2 .

Ans. The flame of a safety lamp exposed to a mixture of air and marsh gas, CH_4 , is increased in height and volume according to the percentage of gas present in the air. There is formed about and above the flame an envelope of burning gas and air. The gas burns with a pale-blue non-luminous flame that is not visible except as a pale-blue cap above the luminous flame of the lamp. As the percentage of gas is increased, and the mixture nears its explosive point, the flame becomes more voluminous and slight explosions take place within the lamp, the lamp often filling with flame. In case a normal flame has been used in testing for gas, the flame at this point assumes a waving spindle shape that rotates in a weird manner about the central axis of the lamp.

The flame of any lamp in presence of a considerable quantity of carbon dioxide, or blackdamp, CO_2 , is depressed or diminished in size. This gas is incombustible. When the percentage of gas present is considerable, the flame of the lamp becomes very dim, and is finally extinguished as the percentage of gas is further increased.

Ques. 10. What gases enter into the composition of firedamp, and in what proportions?

Ans. Besides marsh gas and air, which form the chief elements in firedamp, there are also present, frequently, varying proportions of olefiant gas, C_2H_4 , and ethane gas, C_2H_6 . The proportions of marsh gas and air in firedamp vary from 1:13 to 1:5½ volumes.

Ques. 11. State how the several mine gases may be detected. In what proportion in the air are they fatal to life? In what proportion do they extinguish light?

Ans. Marsh gas, CH_4 , is detected by observing the height of flame cap formed in the Davy lamp when this gas is present in the air. When using the smallest possible flame (⅛ in.), the first cap generally discernible by the experienced eye under favorable conditions is a cap ½ in. high, formed in the lamp when the proportion of gas to air is 1:40; when the proportion of gas to air is 1:30, a cap is formed nearly ¾ in. high; a proportion of 1:25, gives a cap 1½ in. high; a proportion of 1:20, gives a cap 3½ in. high; a proportion of 1:16, produces a voluminous spindle-shaped flame, spreading out in the upper portion of the gauze; beyond this point the entire gauze fills with flame. In the presence of gas where diffusion is rapidly taking place, slight explosions occur within the lamp just previous to flaming. Where a normal flame is used in testing, the height of the flame increases with the percentage of gas present, but no cap is visible. When the mixture contains between 5 and 6 per cent of gas, there is a tall spire of flame that assumes a graceful curve, and rotates slowly about the central axis of the lamp. Marsh gas is not poisonous to the human system, and air containing a large percentage of this gas may be breathed for some time without producing other effect than a slight giddiness, which passes off on returning to fresh air. Pure marsh gas will extinguish the flame of a lamp; but the lamp will continue to burn in a mixture of marsh gas diluted with air.

Carbon monoxide, CO , often escapes detection in the air of the mine because the lamps burn more brightly in this gas than in pure air. The method of detecting this gas in mine workings is by the brightness of the flame, which reaches upwards in a slim, quivering, taper blaze. Air containing five-tenths per cent of carbon monoxide, when breathed for some length of time, will produce death. This gas, being a supporter of combustion, does not extinguish the flame of a lamp.

Carbon dioxide, CO_2 , is detected by the dimness of the lamps, and their final extinguishment in an atmosphere containing much of this gas. Like marsh gas, it is not poisonous, but a much smaller percentage of this gas (10 per cent), when present in the air and breathed for a considerable period of time, will produce fatal results; while 14 per cent of carbon dioxide in the air is required to extinguish the flame of a lamp.

Hydrogen sulphide, H_2S , is easily detected by its smell, which resembles that of rotten eggs. This gas, like carbon monoxide, is a poisonous gas. It is stated by some authorities that 1 per cent of the gas is fatal to life, while other authorities state that air containing as much as 3 per cent of the gas has not produced fatal results. It is probable that the truth lies between these statements, and that 1 per cent of the gas may be considered dangerous, but not necessarily fatal. Like marsh gas, it is not a supporter of combustion, and lamps will not burn in an atmosphere of pure sulphureted hydrogen; but a considerable percentage of the gas is necessary in the atmosphere for the extinction of the flame of a lamp.

Ques. 12. How would you overcome the dangers that arise from the presence of coal dust in the bituminous mines of this state?

Ans. The dangers due to the presence of coal dust in bituminous mines may be greatly reduced by observing the following precautions: Load out the dust and fine coal as made at the working face, and keep the roadways clean of all coal that falls from the cars as they are hauled to the shaft bottom. Where the coal is soft and inflammable, extra precautions should be observed in blasting the coal not to overcharge the holes; to tamp

thoroughly and securely with clay or other non-combustible material; and not to fire any shot depending on the work of a previous shot fired at the same time and expected to explode first. The holes should be inspected before firing by a competent person. In gaseous mines, the dangers arising from the presence of coal dust are greater than in other mines free from gas; and under these conditions, competent and experienced shot firers should be employed to fire all shots after the men have all left the mine. The sprinkling of the face and the roof, floor and ribs of the workings in the vicinity, before the firing of shots, has been advocated by some; but reliance should not be placed on this means as a preventive of accident.

Ques. 13. What is the lowest percentage of explosive gas in which you deem it safe to carry on blasting operations in mines?

Ans. We assume the question intends to ask for the maximum percentage of explosive gas in which blasting operations are safe. This will depend on numerous conditions, such as the character of the workings, nature of the coal, gaseous condition of the air, kind of explosive used. The blasting of coal in mines is dangerous under the best conditions, and an extremely small percentage of gas, assisted by accumulations of dust or fine coal in the vicinity of the shot, especially if the blasting is performed in a soft, inflammable coal, in thin seams or contracted workings, may often lead to serious consequences. Percentages of gas that are not explosive under normal conditions are rendered highly explosive under the pressure of a blast, or in presence of coal dust. When other conditions are favorable, the amount of explosive gas, where blasting is performed, should not exceed, say 2 per cent. When this point is reached, it is the part of wisdom to increase the volume of air in circulation, to decrease the percentage of gas in the current; but this is not to assert that blasting cannot be performed when a greater percentage of gas is present. In a soft, inflammable coal and in contracted seams, blasting should not be performed when there is more than 1 per cent of gas present, and then the utmost care should be observed.

Ques. 14. Where air splits are necessary in mine, how would you determine their limit of usefulness?

Ans. The limit of splitting the air current is generally determined by the reduction that necessarily takes place in the velocity of the air, considered in connection with the available power of ventilating machinery. Whenever the velocity of the air current in any split is too low to produce efficient ventilation at the face, further splitting becomes impracticable except where the power on the air can be increased.

Ques. 15. What is the danger from the firing of tight shots?

Ans. By a tight shot is meant a shot that is too deeply laid, or, as the miner says, too much on the solid, to produce the most effective results. The result is that the temperature of the explosion is very high at the moment when the coal gives way, and the escaping gases reaching the air at this high temperature burst into flame. Much dust is often raised from the floor by the concussion of the blast, and this dust, acted on by the flame of the shot at such a high temperature, may cause a windy shot. At other times, the tamping is blown out, producing a blown-out shot, instead of the coal being broken down. In this case, the force of the powder will be expended on the air instead of being converted into mechanical work in the breaking down of the coal; and if much of the powder is thrown out of the hole and explodes in the air, or if much dust is thrown into the air by the force of the blast, a windy shot or a dust explosion may result. If much dust or gas is present in the airways, a serious mine explosion may result; there is always much danger to the men in the vicinity of the shot.

Ques. 16. What methods do you think the best and safest for producing a current of air in a mine?

Ans. Centrifugal fans are the most reliable means of

ventilation, and the safest where gas is given off in the mine and a large volume of air is required.

Ques. 17. What are the mine foreman's duties?

Ans. He shall be an experienced coal miner, and shall have taken and passed the examination before, and received a certificate of competency from the examining board, and he shall keep a careful watch over the ventilating apparatus and the airways, traveling ways, pumps and drainage, and shall see that as the miners advance their excavations, all loose coal, slate and rock overhead are carefully secured against falling on the traveling ways, and that sufficient props, caps and timbers are furnished upon order of the miner, of suitable size and cut square at both ends, and as near as practicable to a proper length for the place where they are to be used; and such props, caps or timber and the necessary rails and ties shall be delivered at the mouth of the rooms. He shall see that all water be drained or hauled out of all working places before the miner enters, and as far as practicable, kept dry while the miner is at work; and it shall be further the duty of the mine foreman to see that the proper cut-throughs are made in the room pillars of the miners' places at intervals of not more than sixteen yards for the purpose of ventilation, and in all hauling roads, holes for shelter shall be made every thirty yards, and be kept whitewashed, where a space two feet and six inches between the wagon and rib shall be deemed sufficient for shelter; and the mine foreman shall measure the air current at least once a week at the inlet and outlet and at or near the face of the headings.

Ques. 18. What are the duties of the mine foreman relating to the examination of mines?

Ans. The mine foreman, or one of his assistants, shall visit and examine every working place in the mine at least once every day while the miners of such places are or should be at work, and as evidence of his presence shall leave his initial and date of his visit and examination, and shall direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured, and that no person shall be permitted to work in an unsafe place, unless it be for the purpose of making it safe.

Ques. 19. What is the law relating to the insulation of underground electric power lines?

Ans. All underground power lines installed and used for the transmission of electric power in the operation of coal mines in this State, shall be so constructed and equipped with safety devices as to insure the maximum of safety to the employees in such mines. All wires, whether used as feeder lines or as trolley wires, shall be put as close to the roof as possible and shall follow the entry rib as close as practicable. At all cross-overs, where men have to pass under feed wires, such feed wires shall be protected by being carried in a trench cut above the level of the roof, and where this is not practicable, they shall be properly fenced or carried in suitably constructed conduits. All main feeder wires of high voltage entering the mine which are carried along the manways and traveling ways, shall be protected with a suitable fence to protect employees or others from coming in contact with them; and permanent danger signs shall be posted, warning employees of the danger. Any person or persons, association of persons, corporation, operator, lessee or owner of any coal mine, or any superintendent, manager or other agent in charge of any coal mine in this State who shall permit electrical equipment to be installed or to be used in any coal mine in this State in violation of the requirements of this section shall be guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than \$100.00, nor more than \$500.00, for each and every offense.

Ques. 20. What is the law relating to the use of explosives in mines?

Ans. No person shall, whether working for himself

or in the employ of any person, company or corporation, while loading or charging a hole with any explosive, use or employ any steel, iron or other metal tamping bar, nor shall any mine manager, superintendent, foreman or shift boss, or other person having the management or direction of mine labor, allow or permit the use of such bar by any person under his management or direction, unless the same be tipped with at least six inches of copper, and when needles are used, they shall be made of copper only; provided, that no instrument other than all-wood tamping bar may be used for tamping any explosive charge when the hole containing the same also contains a flashing cap or detonator. All holes shall be tamped to the collar with clay or other incombustible material, and when incombustible material cannot be obtained by the employee in the vicinity of his working place, then it shall be the duty of the employer to furnish such material for tamping at some accessible point near such employee's working place.

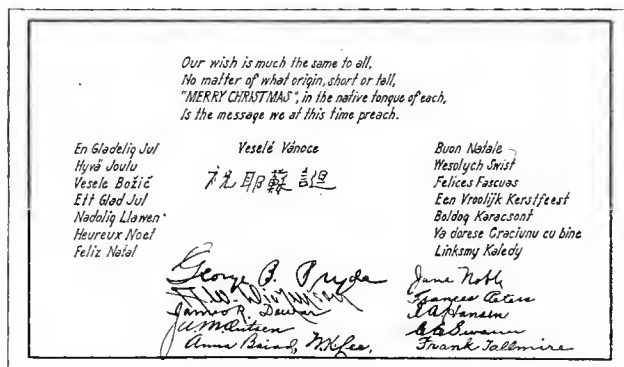
December Accidents

(Continued from page 54)

- Car Dropper**—Was dropping railroad car under tippie chute. Chain on chute caught his hand against brake wheel on car, lacerating fingers of left hand.
- Loader**—While walking to work, slipped on ice and fell on shoulder.
- Miner**—A piece of loose face coal fell, striking him on shoulder, causing slight contusion.
- Boss Driver**—While working on panel slope was struck on leg by rope, severely bruising the muscles.
- Timberman**—While making a wedge for cap piece, struck hand with axe, lacerating back of hand.
- Miner**—Was pulling a loaded car from back entry. He attempted to step on front bumper and fell in front of the car. He was dragged a short distance and received two broken ribs and lacerations of the leg.
- Machine Helper**—Was assisting on cutting machine. While using the ratchet, the handle flew back, striking him on the side of the head, lacerating cheek and fracturing bone.
- Car Repairer**—Was assisting on tippie. While attempting to raise apron on chute, he lost his footing and fell into the railroad car. He received a lacerated scalp and bruised hip.
- Loader**—While using pick at his working place, a small piece of coal flew, injuring his eye.
- Machine Man**—Was holding jack pipe when it fell. Fingers were badly bruised between jack pipe and top of mining machine.
- Driver**—Was pulling an empty car to face. As it went around curve rails at the bottom of room, car derailed and he was squeezed between car and the rib.
- Eickhoff Conveyor Man**—Was connecting blasting cable to a charged hole. For some unknown reason the other end of the blasting cable had been attached to a signal line. Signal line was charged with electricity and the instant contact was made with the ends of the electric detonator, the hole was exploded. Man was slightly cut on chin and was extremely fortunate in escaping with his life. It was a case of gross carelessness.
- Mechanical Loading Unit Foreman**—Was blasting holes on long scraper face. He was standing near the face recovering the blasting cable as the shots were fired. A large piece of loose face coal rolled over, striking him and causing a bad fracture of the leg above the knee.

The Badge of Shame

"In Chicago a scheme has been proposed whereby those found responsible for automobile accidents would wear badges of shame. The motorist would be obliged to turn in his license plates, receive others marked with red numerals and use these for a period of six months.



"It looks like a good plan. The careless driver would wear a label marking him as dangerous among his fellows. Wherever he drove other motorists would look upon his disgrace. At the end of the six months, if he were not a careful driver, it would be because he didn't care what people thought of him. Of most men this plan should make careful drivers.

"Men take pride in their driving, just as they do in a good piece of work done. With their driving advertised as unskillful, terrible, careless, they soon would take steps to repair it. No man likes to have it shouted to the world that he is a failure, and most men do like to think themselves as good drivers.

"Seventeen thousand people in the United States are killed in automobile mishaps every year. If the 'badge of shame' idea can cut that number down, it is worth the trial."

The above article was taken from the Sheridan Post-Enterprise. The only objection we would offer to the plan is that the culprit is let off too light. We have often wondered what the effect would be if every man employed in and about a coal mine, in any way contributing by omission or commission to a fatal accident, including the supervisory force, would be required to wear a brassard or mourning strip on their right sleeve for a period of thirty days after each fatal accident. The plan might lead to more preventative thinking.

Some Christmas Greetings

The Rock Springs General Office Staff indulged in a novel form of Christmas Greeting during the holiday season just passed, translating "Merry Christmas" into no less than sixteen languages, the Chinese characters evolved by that distinguished orientalist "Georgie Plyde," who can keep as many Chinese words up in the air at one time as the versatile Tom Love can handle when he is juggling billiard cues or dinner plates. Of course, we are not underwriting all the words used, as some of them sound like "calling names" or perhaps one of the many new breakfast foods.

The Reliance office force lapsed in poetry, only three lines, however, which were doubtless put together by that experienced versifier Uncle Walt, and Frank McCarty likewise pulled a poet out from under the Community Christmas tree, forcing him to Duckbill eight times. So much for mass production.

Tom Foster, who likes to recite "Casabianca" and the "Wreck of the No. 11," was offered a Christmas verse by his office staff, but Tom would have none of it, preferring a recitation instead, producing, however, the same general happy effect. There is some talk of organizing a verse-making contest next Christmas with Tono, Hanna, Cumberland, Superior and Winton cutting in.

Seasoning

Salt your food with humor, pepper it with wit and sprinkle over it the charm of good fellowship. Never poison it with the cares of life.

The American Secret

By Thomas T. Read

From "The Atlantic Monthly," March, 1927.

I

COLUMBUS discovered America, but the United States as an economic entity has been discovered by Europe since the World War. Not only the production of war material and the loans and gifts made to Europe after the Armistice, but above all the quick economic recovery made here after the war, created a profound impression on the older continent. Two things happened as a result. The first was the widespread conviction that the loans made in and after the war should be regarded as gifts, and the second was a widespread interest in ascertaining how it came about that we could spend enormous sums on the war and still remain prosperous. What was the secret of our workmen being steadily employed at a daily rate about equal to the weekly wage of European workmen?

So, in the past few years, delegation after delegation has come over from Europe, employers, workmen, investigators of all sorts, to study us and return to write books about what they saw, or thought they saw, here. The curious thing is that practically none of them indicate that they attained any real understanding of the fundamentals of our economic organization. But perhaps it is not curious after all, for the most tyrannous thing in the world is a point of view, and an attempt to describe us from the European point of view is almost certain to produce a result similar to that of the blind men of the poem who attempted a description of an elephant. Also, it is quite probable that we do not clearly understand ourselves, on the average, in spite of our reputation for being the most introspective of peoples. What I shall have to say here strikes at the root of the American system.

Human well-being largely consists of having material things and the leisure to enjoy them. Cant immediately interpolates that it is better to be spiritually rich and materially poor than to be spiritually poor and materially rich—a truism that generally correlates the fallacy that being materially rich tends to spiritual poverty, or, conversely, that spiritual richness is promoted by material poverty. Probably this false reasoning has its origin in the circumstance that Jesus was a poor man, for few are intelligent enough to observe that the character of Jesus would have been equally consistent with the possession of wealth. The well-known conversation with the rich young man was intended to convey a point of view to the latter and not to assert the necessity for poverty as prerequisite for spiritual salvation.

Now the only way to have material things is to do work. The nomad hunter who wishes to spend the night in comfort must work to construct a bed and a shelter, and, by the same token, I am at this present moment enjoying a vast amount of work that someone else has done for me. The roof that shelters me from the rain, the steam that keeps me warm, the electricity and the reading lamp at just the right angle over my shoulder, the comfortable chair, the writing tablet, and the pencil that needs no sharpening, are all the results of intelligent, well-directed work. I can have them, not because I have money, for I have none beyond my pay check, but because I have been able to trade my own work for the results of other people's work.

The European analysis of this situation concerns itself with the technique of trading the least amount of my work for the greatest possible amount of other people's work—an essentially individual solution, or, I might say, an uncivilized solution. Herbert Spencer has explained at length how the greatest individual benefit is attained through striving for the general good, but the Socialist

group and the Menckenes have generally succeeded in obscuring the truth of this general principle, with the paradoxical result that the only really intelligent Socialists in the world are "capitalistic" employers. This "bourgeois" group has been able to make a much more civilized and accurate analysis, which is as follows:

Admitting that the things everybody wants are the result of work, how can we get the most results from the least work? There are three evident things to do. The first is to direct work so that it does away with the necessity for repeated work, like piping water into the house instead of continually carrying it from a spring. The second is to analyze work and its products so as to eliminate everything that does not aid in attaining the desired result. Motion study is the example of this that will be easiest understood, but nearly all research falls into this group, whether it concerns the hardening of steel to permit giving the tool a sharper edge so that it will cut more with less work, or the making of artificial silk to eliminate the necessity for tending silkworms. The third thing is the multiplying of work, which began when the first man hitched an animal to the crooked stick with which he was breaking the soil and has attained the stage of hitching Niagara to the needs of the average man; and the end is not yet.

The third is by far the most important, things being as they are, for all human experience indicates that a man cannot do enough work in a year to afford him much comfort, unless he is able to multiply his work in this way. The great countries like China and India, where work is not multiplied, are countries where humankind, on the average, lives on the lowest plane of well-being. This is not for lack of intelligence, for the Japanese have shown how an Oriental people can, when it accepts the Western point of view, attain results that are comparable with ours.

Let me repeat here that I refuse to be led aside into any discussion as to whether the religious pre-occupation of the Oriental is not more important to the human soul than attention to material things. I have had considerable first-hand contact with Oriental religion, and I cannot see that it produces less crime and more happiness than the tenets of Rotary Clubs, nor is it clear to me why meditating on the infinite while sitting in rags on the ground should yield any clearer spiritual insight than doing so while sitting in a comfortable limousine. This discussion is limited to the physical well-being that comes from material things; spiritual well-being is another subject that demands another method of approach.

II

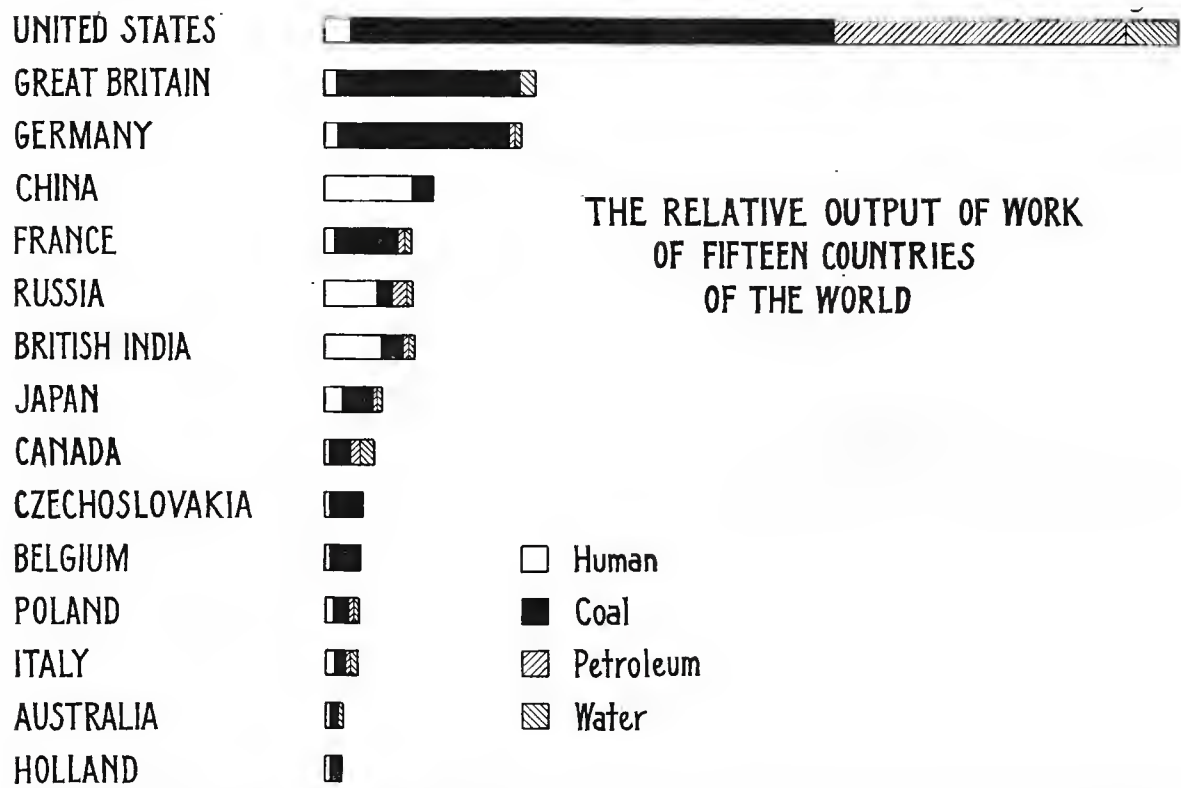
Before going any further, let us consider the relative amounts of horsepower generated by men from the food they eat, by machines from coal and petroleum, and from water power in the principal countries of the world. The accompanying chart reveals the significant fact that, although we ordinarily think of China as a country having nearly four times as many people as there are in the United States, the United States has the equivalent of many times the number of effective workers that there are in China. In short, the United States may be thought of as a country in which the work done is equivalent to the work that could be done by ten times as many people as there are in China, or almost forty times as many people as there are in the United States. Every person in the United States has thirty-five invisible slaves working for him, and the most significant thing is that these thirty-five slaves do not consume anything, so that all the product is available for the "boss." The American workman is

not a "wage slave," but a boss of a considerable force, whether he realizes it or not.

The comparative output of work per person in the various countries of the world is as follows:

China	1
British India	1 1/4
Russia	2 1/2
Italy	2 3/4
Japan	3 1/2
Poland	6
Holland	7
France	8 1/4
Australia	8 1/2
Czechoslovakia	9 1/2
Germany	12
Belgium	16
Great Britain	18
Canada	20
United States	30

living conditions in coal mining towns, I pointed out to him that good roads and the multiplicity of automobiles had made it unnecessary to build towns for the miners when opening a new coal mine, in many instances, because the miners are able to come to the mine in their automobiles from existing towns and return home in the evening after their day's work is over. My English visitor remarked, with a dry smile, that the English coal miner would never be able to come to his work in an automobile. I refrained from asking him why, since I suspected he did not know the right answer, namely, that the average daily production of an American coal miner is approximately three and one-half times as much coal per man as the English coal miner produces. Out of the value of the product of his day's work the American coal miner gets enough to enable him to have an automobile. The value of the product of an English coal miner's day of work is not great enough so that he can get more than a meager living out of it. C. F. Kettering tells me that



The result of this is that, although the average wage is high, the average cost of work in this country is low. A blacksmith works eight hours a day at the rate of one-tenth horsepower, and is paid \$10.00 for it. Two pounds of coal, costing less than one cent, will do the mechanical equivalent of the blacksmith's work. Hence one blacksmith, at \$10.00, aided by eighteen pounds of coal, at 10 cents, will do as much work, at half the cost, as ten blacksmiths at \$2.00 per day each. Since most of the work is done very cheaply by mechanical means, we can pay high wages and still get the work done at less cost than any other country in the world.

Their relative yearly output of work seems, therefore, a sufficient explanation why people in the United States have so much more in the way of comfort and convenience than the people of any other part of the world have, on the average. The per capita output of work in this country is so much larger than the output of work in any other country that the consequent divisible wealth per capita is very much greater.

Not long ago, in talking to an English visitor about

the automobile output per day of American workmen is ten times as great as that of European workmen, which is the same as saying that a European workman has to work ten times as long as an American to get an automobile.

III

This leads up to three more questions, the first of which is whether most of the countries in the world have enough in the way of natural resources so that their inhabitants, with a sufficient output of work, can make a good living out of them. The answer to this question is probably "Yes." The countries which do not have coal are probably the most handicapped; but, in the present development of society, transportation is so generally available that it is possible to get coal in exchange for something else. Argentina is a first-class power with practically no coal supply, but it imports coal, both from England and from the United States, sufficient to meet its present needs, and the price of coal laid down at Buenos Aires is not excessive, because ocean freight rates are low compared with railroad freight rates. Japan is the best ex-

ample of a country that has a very meager endowment in the way of natural resources, and yet it has advanced from a country as economically poor as China into the position of one of the first ranking powers within the memory of people still living. It is evident that, with its limited supply of power minerals, Japan should, as it does, direct itself toward the production of articles of relatively high value, the production of which calls for skill rather than mechanical energy. Where the supply of mechanical energy is scant, the obvious thing to do is to use mental energy as much as possible.

The second question is, how can the countries that now have a relatively small output of work increase their output and thereby increase their capacity to produce and consume? What they need to do is to advance in the same general direction as the countries that have succeeded in multiplying their output of work. Contrary to the opinion of the old Pennsylvania farmer who refused to let his sons go to school because he didn't want them to "earn their living a-settin'," what such countries need is more people who are able to make their living "a-settin'." Much has been said about the unemployment situation in England, and many people seem to think that it is somehow the fault of the worker that he is unemployed. It seems clear, on the other hand, that the real difficulty is that there is not enough profitable employment available for him, and that is because no more capable brain than his has devised a way whereby, when capital and his labor are jointly employed in the production of something useful, the value of the product is enough to furnish an adequate return to both. Going back to our agricultural simile, much the same situation would exist if there were not enough food produced by the primitive farmer to keep his ox in good condition. The ox is not to blame, because if the work is properly directed enough of a crop results to support both the ox and the farmer.

It seems clear that the only possible cure for the unemployment situation in Europe is through business men finding a way to provide employment and to manage the work with sufficient skill so that there is enough product to provide a good living for both the worker and his employer. This remedy, of course, presupposes that the European laboring man will be found willing to abandon his extraordinary delusion that there is a limited amount of work to be done in the country and that by limiting individual output of work he is providing work for others. Nothing, of course, could be further from the truth; there is no known limit to the amount of work that can be done in any country of the world. By deliberately limiting the work he does in a day, the worker is making it impossible to produce enough so that there will be sufficient for a good living for himself and an adequate return on the capital employed in their joint enterprise. If the ox on the farm resolved to work the minimum possible amount, the result would be a crop failure, and both the ox and the farmer would suffer. In the old Hebrew story of the creation of man, God is represented as saying to Adam, "In the sweat of thy face shalt thou eat bread." Many centuries passed before man learned how to multiply the output of work by mechanical means and increase the supply, not only of bread, but of butter and sugar as well, without having to sweat more.

But even if the countries that now have a relatively small output of work seek to increase their output, can they ever hope to approach to the productivity that prevails in our own United States? No one can say with perfect certainty of being right, but Japan has demonstrated to us that a people of much ability can make a satisfactory showing of productive work with quite limited natural resources. The Australian native and our own American Indian demonstrate, on the other hand, how little use people of little ability make of natural resources. My own belief is that in many countries of the world the low intelligence level of the people constitutes more of a barrier to increase of productive work than scantiness of resources.

IV

The third, and final, question is, what good does it do us? Such a question savors of the drawing of the red herring of smart talk across the trail of intelligent reasoning. With one who seriously questions whether I am any better off than my grandfather, though my house has three bath-rooms and his had none, discussion is as futile as it is between a Christian Scientist and a Rockefeller Foundation doctor—the points of view on the accepted things of life are too far apart. But there are some things which are matters of proven fact, not of opinion. The life insurance companies and other social agencies have accurate statistics which show that the average length of life in this country has increased forty per cent in the last half century. In the past twenty years the infant mortality rate has been cut sixty per cent. The death rate from tuberculosis is now less than one-half as high as it was in 1900. The State of New York hopes to eliminate diphtheria entirely by 1930. The scientific research and its application that have made this possible are a direct product of our abundance of work.

The capital which has been poured into the building of school buildings, from kindergartens to universities, and the number of people who devote their whole working time to the teaching of others are also a direct expression of abundance of work. Under social conditions where people have to work hard for a meager living, no one has the time or facilities for research, and people do not have the means to pay for teaching. The estimated value (1924) of the schools in New York State alone was \$467,700,000 and the yearly cost of maintenance was \$250,000,000. The absence of schools in Labrador until outside agencies provided them was a direct result of the meager living that the people of the region were able to make. The grandchildren of a Finlander who trailed reindeer over the snow are able to acquire their education in a \$4,000,000 high school in a mining town in Minnesota, equipped with electric stoves to do their cooking lessons on, and with everything else in proportion. What magic has provided for the grandchildren so much more than was available to the grandfather? No magic whatever, but work—work done by mechanical energy, multiplying the useful efforts of man.

Savings Bank Deposits Continue To Increase

Deposits in savings banks and trust companies in the United States at the end of the fiscal year, June 30, 1927, were \$26,090,000,000, an increase of \$1,368,000,000 or 5.5 per cent over the previous year. The gain, however, was the smallest since 1920, which was the peak year of the upward movement that began in 1918.

Of the increase during the fiscal year just ended \$837,751,000 was due to interest, so that only \$530,343,000 represented new deposits. The average per capita in savings was \$220, an increase of 4.3 per cent over 1926 and of 98.2 per cent over 1918.

In New England 89 out of every 100 persons have a savings account. This is the highest percentage in the country, the lowest being in the Southern states, where the percentage is only 14 out of every 100.

How widespread the habit of savings has grown is shown by the fact that in thirty-six states there were on June 30 more than 48,000,000 savings depositors.

—Business, Dec. 1927.

Bringing 'em Up

Haughty Man: "Tenth floor, please."

Elevator Boy: "Here you are, son."

Haughty Man: "Of all the nerve! What's the idea of calling me son? You're not my father."

Elevator Boy: "Well, I brought you up, didn't I?"

Engineering Department

Rock Springs No. 7 Mine Is Abandoned

By C. E. Swann

ON DECEMBER 31st, 1927, with the passing of Rock Springs No. 7 Mine, one more of the old land marks has vanished. The Union Pacific mines in Wyoming and Utah were operated under the Coal Department of the Union Pacific Railway system from March, 1874, to October 31st, 1890.

On January 9th, 1883, the Union Coal Company was incorporated to operate the Union Pacific Railway Company mines in Colorado, and they were so operated until the incorporation of The Union Pacific Coal Company on September 25th, 1890, to take over all of the coal properties of the Union Pacific Railway Company situated in Wyoming, Utah and Colorado.

Rock Springs No. 7 Mine was opened up under the Coal Department of the Union Pacific Railway Company in 1888. This was a drift mine, driven in a straight line for about 7,000 feet, on a small uphill grade, but it was decided that due to the rolling nature of the coal seam it would be better to drive the entries or levels on a good haulage grade rather than in a straight line across the rolls, and this entry was continued a distance of 2,500 feet on haulage grade before it was stopped in November, 1900, on account of being too close to the No. 9 Main Haulage road on the same seam.

No. 7 Mine has the distinction of having installed the first electric haulage locomotive in the West, which began hauling coal in the summer of 1892. This locomotive was of the Thompson-Huston ten-ton type, having a speed of eight miles per hour, and was in continuous operation until a year or two ago and can be used at the present time.

The adoption of motor haulage, handling very long trips of cars, made it very desirable to have good grades on the main haulageways, therefore in the fall of 1895, No. 1 Dip Entry was started off the Main Drift Entry at about one-half mile inside the mouth of the mine to eliminate part of the bad grades, also to secure more territory between No. 7 and No. 9 Mine workings. The grade along the Main Drift Entry from the mouth of the mine to the No. 1 Dip Entry was irregular and it was decided to drive a new motor road, on a good haulage grade, through the worked out, caved area between No. 7 Drift Entry and No. 9 Mine Main Motor road. This was satisfactorily accomplished during 1893, making available a good motor haulage road to the working faces.

The tippie which now stands near the mouth of No. 7 Mine was erected in 1892 and, with small changes at the screens, has served this mine until the present time. Although this tippie is very crude compared to our modern tippies, its removal will denote the passing of a well known land mark at Rock Springs.

The No. 7 Mine Main Motor road has been extended until it is now four and one-half miles from the mine opening, and the distance from mouth of the mine to "E" Plane, located in the Lionkol canyon, is between three and one-half and four miles. For several years, until a tippie was erected near the town of Lionkol to handle coal from "E" Plane, the average motor haul for coal coming from No. 7 Mine was three and one-half miles.

The coal seam in the No. 7 Mine has a dip or pitch to the northwest of from eight to ten feet in 100 feet, and varies in thickness from four and one-half to seven and one-half feet, is generally clean and of good quality.

The different coal seams in the Rock Springs series are not numbered in order from the top down, as each derived its number from the number of the mine first opening on that seam, and in this manner No. 7 Seam derived its name from No. 7 Mine.

The No. 7 Mine proper worked out an area of about 900 acres, and also worked over 200 acres of land partly worked out by old Rock Springs Nos. 8 and 9 Mines. When No. 7 Mine was abandoned the Main Haulage road from mouth of mine to "E" Plane was left intact so that miners can be transported from Rock Springs to the "E" Plane workings, now known as No. 2 Mine.

No. 7 Mine will long be remembered by the writer for two incidents which happened when he was the mine surveyor at that property. Somewhere about 1900, my helper and I had occasion to travel from the Main Motor road in No. 7 Mine to the Main Motor road in No. 9, and he suggested that we cut across the worked out area between same, which was still open, and the journey was made.

Being young and daring, we little realized that **all alone** feeling which overtook us about half way across an open underground area 800 feet wide and about 2,000 feet long, without a sign of support except a good roof, but it was useless to turn back, and we heaved a genuine sigh of relief when we arrived at No. 9 Motor road and resolved never again to travel that way.

One night while making a check survey from No. 1 Dip up "C" Plane into the old abandoned Main Drift Entry, I had two Chinese helpers and everything was going satisfactorily until we reached a portion of the abandoned entry about 2 A. M., when a rustling noise was heard coming from the inside of the entry.

Looking toward the face of the entry we could see what appeared to be a large white object with eyes like balls of fire coming towards us. It passed us going a mile a minute and as soon as I recovered from the shock I looked to see what had become of my helpers and could just see their lights moving swiftly towards the outside. I ran after them, but was unable to persuade them to continue the survey and was forced to go back and get my transit and call it a shift.

Later inquiries developed the fact that a large white cat had its home in the entry, but I am not prepared to say it was not a wild shetland pony that passed me that night.

Protective Grounding

By D. C. McKeenan

IN ORDER that lives and property of a community may be protected against the hazards due to high voltage wires becoming crossed with those carrying low voltage, such as house circuits, it is necessary to provide protective ground connections. Likewise, high voltage motors and metallic frames or enclosures containing high voltage apparatus should be protected by grounding.

The desirability of such grounding is no longer a matter for question or argument, as it has, in innumerable cases, proven its protective value. Such compulsory grounding requirements are embodied in both the National Electrical Code and the National Electrical Safety Code.

However, where such grounding is not carried out strictly in accordance with both the wording and the spirit of the rules in both codes, it is worse than useless, in that it creates a false sense of security.

There is little question but that a great deal of the

responsibility of seeing that the grounding rules are observed and enforced rests with the men in charge of the work. However, **the individual whose hands do the work must shoulder some of the responsibility for providing a safe and reliable job.**

Ground wires that may corrode and thereby make poor contact, ineffectively soldered joints, or terminals and injured wires that may break after installation are some of the details that should be observed by the person who makes the installation.

For the above reasons electricians should satisfy themselves beyond doubt that the ground connection in its entirety will perform the function that it is intended to do.

In most cities each and every service is grounded to the water supply piping for the building served, and permission to connect to the piping system has been recommended by the American Water Works Association without fear of injury to the water system. Where the low voltage secondary network is adequately protected by grounding, there can be no hazard from high voltage crossings, either accidental or intentional.

Any system of protective grounding to be effective must be capable of safely carrying the maximum current required to trip the circuit breaker that supplies the circuit. The present day distribution of electricity for public use involves the use, for the greater part of this distribution, of voltages ranging from 2,000 volts to as high as 200,000 volts. Generally speaking, the equipment on the customer's premises does not utilize these higher potentials, the voltage being reduced to 110 or 220 volts for lighting and small power and to 220, 440 or 2,200 volts for large power installation.

There is of necessity a very close association between these higher voltages used for transmission and distribution of electricity, and the low voltage systems which are installed on the customer's premises. The high voltage is reduced to low voltage by means of a transformer which is generally installed on an electric light pole on the highway, at a point not far from the premises to be served. The transformer consists of a large iron tank in which is enclosed an iron core, having thereon two windings of copper wire, one of which is connected to the high voltage distribution system and the other to wires running to the low voltage system on the customer's premises. There is no direct electrical connection between these two windings, but on the contrary they are each carefully insulated from the iron core and from each other, so that normally the high voltage from the distribution system cannot pass through the transformer to the low voltage wires on the customer's premises. However, it sometimes happens that the insulation of a transformer is injured, perhaps from a lightning discharge or due to excessive heat from a transformer being overloaded, or perhaps due to old age, and in such cases it is possible for the higher voltage of the distribution system to find its way to the customer's wiring.

It sometimes happens that the wires of the high tension system may become crossed with the wires of the low tension system feeding the customer's premises, due to any one of several causes, such, for instance, as the limb of a tree which is broken off in a storm forcing the wires together, a broken down radio aerial carelessly installed over the electric light wires, the breaking of the electric light wires themselves during heavy sleet and wind storms, etc. In fact, if the high and low voltage wires come in contact with different portions of the same tree, a dangerous condition may result. It is not altogether necessary that the wires actually be in contact with each other.

When a person touches any part of the house wiring system it is always possible that a shock may result, and as a general proposition the seriousness of the shock will depend upon the voltage which may be present on that system, although there are, of course, many other factors to be considered in each individual case. The voltage to which one may be subjected without fatal results depends to a considerable extent upon the physical condition of

the person, also upon the character of the contact which is made with a charged wire and the earth or other conducting substance through which the current passes. If a person establishes fair contact with a voltage of 2,000 volts or greater, it is generally fatal. Lower voltages are liable to be fatal and are always serious. There are cases on record where it would appear that people have actually been killed by a voltage as low as 110, but in such cases the contact conditions have been exceptional, a considerable part of the body generally being immersed in water or other conducting liquid. As already pointed out, there is a possibility of the higher voltages from the distribution system, namely, voltages of 2,000 and higher, being communicated to the customer's wiring. It is obvious that some safety measures should be taken to protect the public generally from the dangerous conditions which would otherwise exist. To quote the United States Bureau of Standards:

"The frequency with which accidents occur from this cause is sufficient evidence of its seriousness. The life hazard involved here is very serious because people are continually coming in contact with electric light fixtures and other apparatus and appliances connected to low voltage circuits. It is therefore incumbent upon persons installing such circuits to make them as nearly absolutely safe as practicable. Much can be accomplished in this respect by grounding them. This method of protection was first suggested by Professor Elihu Thompson in 1885, who patented it and dedicated the patent to the public."

The hazards involved are generally recognized by the electrical industry and are usually guarded against by the practice of installing ground connections or safety circuits, by means of which one of the wires of the customer's wiring system is connected directly to the earth. This is usually accomplished by connecting to the cold water piping system. It is sufficient to say that it is generally conceded that when a safety circuit of this nature is installed on the customer's premises, and where there is a general water supply system to which it may be connected, there is substantially no possibility of receiving a shock of higher voltage than that used for the lighting circuits, which seldom exceeds 115 volts.

Unfortunately, there does not always exist upon the customer's premises a water supply system which is connected to a general distribution system in the street, such as a municipal water supply, and when this kind of an earth connection or something equivalent is not available, it often becomes very difficult to obtain an earth connection which will afford proper protection against electric shock should a high voltage be communicated to the house wiring. It is also true that when the house wiring system is grounded by means of a safety circuit, a person touching the ungrounded wire of the system while standing upon a damp surface or being otherwise in contact with a metallic surface, such as a water pipe or other conductor which is in any way connected with the ground, will receive a shock of approximately 115 volts, and such shocks are always more or less serious. In other words, **the grounding of the customer's wiring does not absolutely protect the user against receiving a shock, even when there is no high voltage present.**

Because protective grounding circuits do not absolutely prevent shocks, there has been some difference of opinion as to the advisability of grounding secondaries. The opponents of the system, while admitting that it affords a high degree of protection against shocks from the higher voltages, argue that this advantage is offset by the increased number of shocks which may be received from the low voltages; but the practice of grounding seems to have stood the test of time and is constantly increasing, and, in fact, today is very nearly universal.

It has been suggested that instead of grounding the low voltage circuits as a safety measure, protection against high voltage shocks might be obtained by providing an adequate amount of insulation on the house system, but this is hardly a feasible proposition. Even assuming that it might be feasible to sufficiently insulate the wires

themselves, if cost is not taken into consideration, it is very difficult to see how the insulation in fixtures, portable lamps, electric irons, toasters, washing machines, curling irons and the hundred and one other appliances which are today being used, could possibly be insulated to withstand safely even 2,000 volts, to say nothing of higher voltages. No one who is thoroughly familiar with the possibilities of a 2,000-volt circuit would care to depend upon insulation for this protection.

Another reason for definitely and thoroughly grounding the house wiring is that it is practically impossible, over a period of years, to keep the wiring entirely free from grounds in any case, as accidental grounds are almost sure to appear in the course of time, and then the conditions are far worse than they would be if the grounding had been properly done, for two reasons: In the first place, an accidental ground is a fire hazard, and in the second place, an accidental ground on a three-wire lighting system makes it possible for the user to receive a 230-volt shock, whereas a 115-volt shock would be the limit were the circuit properly and adequately grounded. Even though the secondary system is undergrounded and there is no cross wire high tension wires or other leakage from the high tension system to the house wires, there is a possibility of obtaining a shock of even more than 230 volts from such a system because high voltages are frequently produced on low voltage systems by lightning or other disturbances on the high tension lines in the neighborhood. It is possible that such induced voltages might be as high as 500 volts, but proper grounding would afford ample protection against a voltage of this magnitude and character being built up on the house wiring.

Adequate grounding of the house wiring practically eliminates the possibility of receiving a high voltage shock. Even if it is necessary to make the ground connection to an artificial ground, due to the absence of a water piping system, it is often possible to obtain practically 100 per cent protection, and in any case the protection is very substantial. As we have seen, the only objection to this method of protection is that any person touching an underground wire of such a system may receive a 115-volt shock. This difficulty, however, is practically eliminated by modern wiring methods such as are required by the present day electrical codes. The so-called "polarized" method of wiring requires all the connections to fixtures, sockets, etc., with which a person might possibly come in contact, to be connected to the wire which is grounded, and the undergrounded wire is generally sufficiently concealed and protected so that there is almost no possibility of persons coming in contact with it; and it is no longer considered good practice to place any switch, lighting fixture or appliance outlet within reach of a bath tub or plumbing fixture; and porcelain sockets are required for cellars or any damp location. In fact, the possibility of receiving even a 115-volt shock is practically eliminated by present wiring methods, with the single exception of the case of portable appliances.

There is a possibility of receiving a shock from portable appliances, and this can only be eliminated by grounding the metal enclosures of these appliances. This subject is now being given very careful study by several large electrical organizations for the purpose of eliminating even this possibility of receiving a shock. It has been considered entirely feasible to ground the metal enclosures of appliances such as electric irons, toasters, vacuum cleaners, washing machines, etc., to the grounded wire attached to these appliances, and this is probably the method which eventually will be adopted, but the great difficulty comes from the fact that these appliances are connected up by means of detachable plugs and the plugs themselves are not polarized. That is to say, they are not arranged or constructed so that the plug can only be inserted in the receptacle in one particular position, thus insuring that the same wire running through the cord to the appliance will always be connected to the grounded wire in the receptacle. If the plug is inserted in the opposite direction, the frame of the appliance would immediately become alive and persons touching it

would receive a shock if at the same time they touched a plumbing fixture or stood on a wet floor. It is, of course, possible by proper regulations to require all future plugs and receptacles to be polarized and the metal enclosures of all portable appliances connected to the grounded conductor, but it is a very difficult matter to have the hundreds of thousands of receptacles now installed changed to polarized receptacles, and this is the real problem which the industry is facing today. However, the electrical industry has solved harder problems, and no doubt it will solve this one, and when it has done so the protection against serious electrical shocks will be substantially complete.

It is always feasible to ground the frames and metallic enclosures of portable appliances by means of a third or ground wire. This means that the flexible cords for the appliances would have to contain three wires instead of two, which would make them considerably bulkier and less flexible, and the plugs and receptacles would also have to be three-wire. Since practically all of the receptacles now installed are two-wire, this presents serious difficulties. However, this system is readily available to industrial plants and is being used in some instances, more especially in mining and other plants where conditions are particularly severe.

While the grounding of the low voltage wiring is very common practice, the fact remains that the methods of doing this work are, for the most part, none too good. In fact, they are often so poor as to fail to accomplish their purpose. The constantly increasing use of electricity and the very high voltages being used today for transmission and distribution, as well as the tremendous amount of power concentrated in these systems, make it increasingly necessary that the wiring methods employed for safety circuits be of the very best and of better quality than has generally prevailed in the past.

(An article dealing with the method of making ground connections will appear in the next issue.)

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Master Planks in the American Industrial Program

A paper prepared by Wilfred Lewis, President, Tabor Manufacturing Company, Philadelphia, and presented before the Third International Management Congress at Rome in September, 1927, and read at a meeting of the Taylor Society, New York, December 9, 1927.

This paper, touching on improvement in living standards, increase of output and wages, co-operation of management and workers in the improvement of methods and the stabilization of employment, is a worth-while contribution to our American industrial life. Those who have heard the paper read find no weakness in the principles presented, there, however, is a definite lack of knowledge of the fundamental forces which influence industrial development, and the Department of Commerce is now preparing for the exhaustive study of industrial trends, including possible extensions of market, unemployment, etc. Scientific management is not a system, neither is it a theory, rather is it an attitude of mind, the desire to create and thereafter to share in that which is created. Education, leadership, vision, are the tools most needed, coupled with energy and a patient showing of the way.

SCIENTIFIC management in the United States of America aims:

1. To raise living standards still higher by increasing the real income of all engaged in industry through progressive improvements and the cheapening of industrial processes;
2. To raise the high level of American wages still higher, with increases in output per worker;
3. To inspire both managers and workers to collaborate in order to improve the technique of production and distribution;
4. To keep men and machinery fully occupied.

I. The Gain in Real Income

In his latest message to the American Congress, President Calvin Coolidge remarked upon the "astonishing result of a reduction in the index price of commodities and an increase in the index rate of wages." Here has been the most direct of all additions to consumer buying power expressed in lower cost of production and increased capacity to consume the goods thus produced. The purchasing power of the average income in the United States in 1926 was forty-four per cent greater than in 1909, and thirty-six per cent greater than in 1921. This is based, of course, on the increasing output per worker. Between 1899 and 1904 the output per worker rose about five per cent; between 1904 and 1909, by about seven and one-half per cent. The depression of 1914 and the industrial dislocation which resulted from the war were such that the average output per worker in 1914 and 1919 was not greater than in 1909, although in that interval there had certainly been technical progress. Between 1919 and 1923 the output per worker in factories increased about twenty-four per cent, and between 1923 and 1925 it increased again about eleven per cent. This is true of small plants as well as large; of those which are not engaged in mass production as well as those which are. President Coolidge accounts for our remarkable economic advance as coming chiefly through the elimination of industrial waste and the progressive gain in standards of efficiency.

The principles of scientific management and administration developed by Frederick W. Taylor and his disciples have at length grown to dominate the American industrial scene. The desire to reduce costs and to increase production, along with the conviction that scientific methods can be found which will make these things possible, are characteristic of the spirit of American management today. This spirit is as potent in the little business as in the big. Some of the smaller units are foremost in management methods.

Within the confines of its forty-eight states, lying between two oceans, the American nation has a trading area as great as all Europe, with no tariffs, no barriers to the freest exchange of commodities. In this continental Customs union the huge aggregations of modern business and hosts of small enterprises have grown up, serving six score millions of buyers, and benefiting consumers as

well as producers by the economies of scientific production and distribution.

With the growth of quantity production has come an increasing interest in quality. The American continental market is so diversified and exacting as to make quality increasingly important.

Another element, the financial element, has entered in. The annual savings of the United States now amount to about one-ninth of the national income, and the wise use of credit is fundamental to our social and economic development. The mining industry now employs more than \$10,000 in capital for every wage earner which it employs; manufacturing, more than \$5,000; the railroads, more than \$8,000.

The policy of the American bankers has been increasingly responsive to the urgency of our great industries, and the stabilizing effect of the Federal Reserve System upon credit operations has been reinforced by a constant strengthening of the stream of scientific information by which sound credit policy is guided. Our bankers engage economists and engineers to advise them on industrial policies, and the best financial minds of America are now beginning to be intent on discovering, if possible, the right relations of finance to scientific production and distribution so that these may be regularized.

II. The High Level of American Wages

It has become increasingly plain that high wages are fundamental to American prosperity. Some economists have suggested that high wages are the strongest incentive to lower costs of production and distribution. But at the same time that the high payroll brings pressure to bear on the management to increase production and to decrease costs, it is also increasing the purchasing power of the consumers and sustaining or increasing the market for goods. For more than a generation real wages, that is, the amount of goods which wages can buy, have been higher in America than anywhere else in the world; in the period since 1921 they have jumped about thirty-six per cent. This has stimulated scientific management to still further savings, made effective through master controls and predetermined programs, bringing materials and men together at the right moment to permit the nicest precision of movement and a subdivision of work throughout standardized processes.

III. Willingness of Workers to Improve Technique

Scientific management in America has brought changes in technique and has forced rapid adoption of new industrial processes in a period of extraordinary developments; it has also encouraged a definitely co-operative attitude on the part of the workers. The point of view, both of management and men, has changed for the better. During the years 1916 to 1922 the number of employees directly involved at some time during each year in strikes and lockouts averaged more than 1,700,000; from 1923 to 1926 these figures showed progressive decreases, averaging 540,000; in 1925 only 330,000 men were thus involved—a fact extraordinary in a period of marked prosperity.

There are co-operative systems of workers and managers now installed on certain transcontinental railways. The workers hire their own consulting engineers; employers solicit suggestions for betterment from the employees, adopt them and share with them the resulting savings; and this movement to eliminate waste and to reduce costs is sponsored officially by the American labor unions. Mr. William Green, President of the American Federation of Labor, wrote in a recent article in the Manchester Guardian Commercial, "Holding that only through increased productivity can higher standards of living be maintained, and that all groups, therefore, have a mutual interest in increasing the efficiency and hence the productivity of industries, our trade unions recognize the interdependence of management and wage earners, though their interests may not be necessarily identical."

IV. The Effort to Keep Men and Machines Fully Occupied

Since growth and change are the outstanding characteristics of American industrial conditions, a result is that more attention must constantly be paid to the task of keeping men and machines fully employed. Our immigration has been restricted, and our population has increased since 1919 by only two per cent a year, yet 8,380,000 workers produced in 1925 an output one-quarter greater than 9,000,000 workers in 1919. There has been a reduction in the number of persons engaged in agriculture, in manufactures and in transportation since 1919, yet output has greatly increased in every one of these fields. Most of this increase has come about since the depression of 1920-21. In spite of this extraordinary fact, little if any unemployment has resulted. The astonishing growth of the services connected with the distribution of goods, the professional and personal services, and the new activities called into being by the automobile, have apparently absorbed those who in other circumstances would have gone into industrial production or else would have been idle. Close to a million persons must now be employed, outside of automobile factories, in work connected with operating or keeping in operation the more than twenty million automobiles and motor trucks in the United States. The building of highways has absorbed others. In the period from 1920 to 1926 the consumption of rayon mounted from less than 12,000,000 to more than 75,000,000 pounds; sales of radio goods rose from practically nothing to almost \$500,000,000; in 1926 more than a million washing machines and nearly a million and a half vacuum cleaners were sold. And at the same time that these industries were growing they were stimulating all those dependent upon them, and were thus creating a constantly widening circle of profitable employment.

To take a single example, the automobile industry in 1926 consumed approximately fourteen per cent of all finished iron and steel products, and stimulated the iron and steel industry and its branches.

With the rapid development of new industries and the stimulation of the old, the American manager is forced to keep machinery employed or to scrap it; to keep men employed or to lose them to a better manager who will keep them employed. New types of machinery may be gradually introduced at a rate no more rapid than that of the normal labor turnover. Employers are ingenious in working out methods of training workmen to use new machines, so that the labor force may be kept intact. Our practice is far from perfect in these respects, yet its tendencies are plain and there is growing appreciation of the fact that industry must be stabilized, that employment must be secure if prosperity is to be maintained.

It is because we have made real progress in these directions; it is because we feel as employers, as employees, as consumers, as bankers, as economists or as engineers that we are learning to collaborate more effectively every day;—it is for these reasons that we in America look forward hopefully to the future.



And there, high above the Memorial, above beautiful Washington, was the face of the kind Lincoln, mother had taught her about, that she'd dreamed about in her childhood.

This drawing was made by the late Walter P. Murphy after a short discussion about the celebration of Lincoln's birthday a year ago. It is taken from the study of Lincoln which Mr. Murphy most admired and we present it now with this short story sketch we could wish was more in keeping with the artistry of him whom we like to think of as painting where "the Master of All Good Workman shall set us to work anew."

.....
 "For each for the joy of the working, and each, in his separate star,
 Shall draw the Thing as he sees It for the God of Things as They Are!"
 —EDITOR.

The Lincoln She Knew

J. McD.

Mary had arrived in Washington for the National Essay Contest. It was country-wide. First, every county had sent its best to the State Meet. That had been a tremendous day, with the trip to Washington as a prize for some boy or girl. It was wonderful to have won out, wonderful to have pleased the Old High back home. The Principal had been so kind. And dear Miss Williams, who made everybody "play up," but was so pleased she actually had tears in her eyes. And Mother! Mary's own tears came when she thought of Mother. Mother had been (she always said it herself) an immigrant. And Mary never tired of hearing her tell about her trip to America. The big boat, with so many new folks, some friendly, some not so friendly. The utterly desolate feeling as a new land was reached, and on all sides there was a new language. Was it really the great America? Was it the land of Lincoln? She'd heard about him in her own language. Somehow he'd seemed a great part of the idealism, the fairness, the opportunity, more—of the friendliness—she'd expected. She'd heard about him and thought about him in her native Italian. He hadn't seemed strange or foreign. He was hers.

Mary always had gasped with anticipation when her mother came to the "end of her ticket" in her story. "My courage lasted until the end of my long ticket," she'd say, and Mary would settle down to listen to the rest of it. The new town. The loneliness. The strange money. But through it all her faith in the land of Lincoln had held until the language came, and with it came understanding and a love for this country of opportunity, a loyalty which was her passion. Then she married and established her own home, and when Mary was born she was laughingly and lovingly called "A little American." And she, too, was told stories about Lincoln. All the childhood stories of the native Italy. And Mother had always been eager for Mary to make the most of her school. The Old High had no more loyal devotee.

Mary had arrived in Washington for the National Essay Contest. "Lincoln, the Great Emancipator," was the subject.

On the train going east Mary had met several girls from other states. They were all so wonderfully happy. The high anticipation they shared held them together.

Washington. And more girls. A committee met them and presently they were taken on a trip around the city. Beautiful Washington. Mary scarcely spoke, although around her girls were chattering excitedly and happily. The Lincoln Memorial. The committee thoughtfully stopped longest here. Mary was enthralled. Grandeur. Simplicity. Beauty. America's stupendous white-columned tribute to Lincoln—to her friend. It was so wonderful it hurt.

But that evening, in her room, when Mary read her essay for perhaps the last time, for tomorrow was the contest, something had happened. She was frightened.

"Mother! Mother! Where is he, your Lincoln?"

"Mother, please, why don't you come too?"

"My essay was out of our hearts together."

Quickly Mary left the hotel and asking directions here and there, found her way to the Memorial again. She must find him, the old friend, her mother's friend.

Stumbling, her need making her talk to her mother quite aloud, Mary came.

"Mother, please, I must tell about your Lincoln and I need him near me."

"He's in my essay, you know, Mother. I hadn't seen the Memorial then. I love your Lincoln, Mother."

And then in the slowly descending twilight, high above the Memorial, above beautiful Washington, came the face of the wondrous Lincoln Mother had taught her to love, a kind face, the face she'd dreamed about in her childhood. * * *

And Mary told about him on the morrow. And Mary won the contest.

George Washington

By Ethyl M. Portwood, Reliance.

February 22, 1732, at Bridge Creek, on the Potomac River, was born the "Father of our Country," George Washington. Augustine Washington, his father, died in 1743, leaving several children, George being the oldest, by his second wife, Mary Ball. At the early age of 19 years, George Washington was appointed adjutant-general of one of the districts of Virginia, with the rank of major. In November, 1753, he was sent by Lieutenant-Governor Dinwiddie of Virginia to visit the French army in Ohio Valley on important business. War followed, and in 1754



Miss Ethyl M. Portwood, Reliance.

he was promoted to the rank of lieutenant-colonel, and engaged in the war. In 1755 he acted as aide-de-camp to General Braddock. Soon after this he was appointed by the Legislature Commander-in-Chief of all the forces of the Colony, and for three years devoted himself to recruiting and organizing troops for her defense. In 1758 he commanded a successful expedition to Fort Duquesne. He then left the army, and was married to Mrs. Martha Custis, a widow lady of Virginia.

For sixteen years he resided at Mount Vernon, occasionally acting as a Magistrate or as a member of the Legislature. He was a delegate to the Williamsburg convention in 1773, which resolved that taxation and representation were inseparable.

In 1774 Washington was sent to the Continental Congress as a delegate from Virginia. The following year he was unanimously chosen Commander-in-Chief and assumed command of the Continental Army on July 2, 1775. He commanded the armies throughout the War of Independence. At the close he resigned his commission December 23, 1783, and retired to private life.

He was a delegate to, and president of, the National Convention which met in Philadelphia, Pa., in May, 1787, and adopted a new Constitution that greatly increased the power of the Federal Government. He was unanimously elected the first President of the United States, and was inaugurated on the 30th of April, 1789, in New York City. At the end of his first term he was unanimously re-elected. He retired March 4, 1797, having declined a third term. In September, 1796, he issued his Farewell Address to the people. July 3, 1798, he was again appointed to the command of the armies of the United States, with the rank of lieutenant-general.

He was a Freemason, and served as Master of his Lodge. He died at Mount Vernon, Va., after a short illness, December 14, 1799, and was buried there.

Inauguration of Washington

The first inauguration of a President of the United States took place in New York on April 30, 1789. A general holiday had been proclaimed, and amid scenes of jubilation, the inhabitants of Manhattan Island turned out in great numbers to witness the spectacle. Shortly after noon, on the balcony of Federal Hall, in front of the Senate Chamber, the oath of office was administered to the Father of His Country by the Chancellor of the State of New York. With John Adams, who had just previously been inaugurated Vice-President, standing on his right, and Robert R. Livingston on his left, Washington laid his hand reverently on the large open Bible placed on a table before him, and at the conclusion of the oath, responded in a tone of vibrant solemnity, "I swear, so help me God." The Chancellor then stepped forward

and called out to the enormous crowd in the street below, "Long live George Washington, President of the United States!" while children shouted for joy and old men wept at the significance of the occasion.

Washington University Given Large Donation as a Memorial to "George Washington, the Mason"

The Evening Star, Washington, D. C., carries an account of a recently announced gift to Washington University from the Supreme Council, Scottish Rite Masons, of the Southern Jurisdiction. A most significant announcement, since it tells of one of the largest gifts ever made to education, significant as a memorial to General Washington and as making possible the carrying out of a plan initiated by him and for which he provided some funds by his own will. Perhaps it is significant too in that the announcement is made not long before the birthday all America has observed and will again observe—Washington's Birthday.

The gift is \$1,000,000 and will be available at once so that a School of Government will be in operation at the start of the fall semester this year. The disposition of the fund will be entirely in the hands of the University trustees and the endowment is expected to make Washington the center for students in the science of government.

In receiving the gift Dr. Marvin, president of Washington University, said:

"The resolution which forms the basis of this discussion is not only one of the most generous documents in the history of education in America, but one of the most significant.

"George Washington intended to endow a university within the limits of the District of Columbia, and set aside certain securities for that purpose. From what we know of his ambitions and aims, we can only conclude that his desire was to see a great institution which would exert a strong influence in developing fundamentally sound citizenship.

"The Supreme Council now makes that ambition possible by offering an endowment for a School of Government that will meet the scope and in purpose, the great principles enunciated in the Constitution of the United States. * * *

"Young men and women must not only study political theory, but they must also study our governmental procedure and know how it really works, to realize the fundamental principles of the Constitution. Such practical study of the government in action can best be accomplished in Washington."

The purpose of the gift is further expressed in the resolution which accompanied it from the Supreme Council, Scottish Rite Masons:

"Whereas, Out of the great love for his country and its constitutional form of government and his strong desire to perpetuate the same through the education of the youth of the land, George Washington did, in his last will and testament, set apart a portion of the gift which the State of Virginia had made to him as an expression of its appreciation of his services in the Revolutionary War, and did specifically provide that such portion should be held for the maintenance of a national institution to aid in completing the education of young men in all the branches of polite literature, in arts and sciences, and in acquiring knowledge in the principles of politics and good government; and,

"Whereas, To further emphasize the definiteness and strength of his judgment upon the value of education to the young men of the nation, he called attention in that
(Please turn to page 72)

Abraham Lincoln Walks at Midnight

It is portentous, and a thing of state,

That here at midnight, in our little town,
A mourning figure walks, and will not rest,
Near the old court house pacing up and down,
Or by his homestead, or in shadowed yards,
He lingers where his children used to play,
Or through the market, on the well-worn stones,
He stalks until the dawn-stars burn away.

A bronzed, lank man! His suit of ancient black,
A famous high-top hat and plain worn shawl
Make him the quaint great figure that men love—
The prairie lawyer, master of us all.
He cannot sleep upon his hillside now;
He is among us, as in times before!
And we who toss and lie awake for long,
Breathe deep, and start, to see him pass the door.

His head is bowed. He thinks of men and kings.
Yea, when the sick world cries, how can he sleep?
Too many peasants fight, they know not why;
Too many homesteads in black terror weep.
The sins of all the war-lords burn his heart,
He sees the dreadnaughts scouring every main;
He carries on his shawl-wrapped shoulders now
The bitterness, the folly and the pain.

He cannot rest until a spirit-dawn
Shall come—the shining hope of Europe free;
The league of sober folk, the workers' earth,
Bringing long peace to Cornland, Alp and Sea.
It breaks his heart that kings must murder still,
That all his hours of travail here for men
Seem yet in vain. And who will bring white peace
That he may sleep upon his hill again?
—Vachel Lindsay.

Boy Scout Leadership Course

On the evenings of January 12, 13 and 14th, Mr. D. W. Babcock taught a Boy Scout Leaders' training course at the Rock Springs High School. A thorough discussion of troop organization occupied the first evening; game methods of teaching second class requirements were taught the second evening, and a demonstration of several tried methods of conducting an investiture service was given to the Scoutmasters at the last session. These leaders' schools will be repeated several times during the winter, and the sessions are open to anyone interested in Boy Scouting. Specific information may be obtained from Mr. Williams, Scoutmaster, Rock Springs.

Boy Scout Court of Honor On February 6th

Scoutmaster Yates of Green River is arranging a program for the Court of Honor to be held there on the evening of Monday, February 6th, under the direction of the Education Committee, of which Mr. E. M. Thompson of the Rock Springs High School is chairman. The public is invited to the entertainment and there will be many awards of merit badges and class badges.

My Valentine

Here's that you may live a thousand years,
And I the same, less one day;
For I would not care to live one hour
After you have passed away.

—== Ye Old Timers ==—

Firemen In Rock Springs Then and Now

"FIREMEN, save my child!" has meant a lot of things to the men who have manned the Fire Department of the city of Rock Springs and its predecessors—"The Clark Hose Company" and the "W. K. Lee Volunteer Fire Company." On one occasion it meant leaving a banquet in dress clothes to answer a call to a fire in old No. 1 Mine slope. And on another, it meant being called on to rescue a family, marooned in their home built into Dry Creek, during one of the periodic floods when Bitter Creek was filled to overflowing with troubled and troublesome waters. And it has meant volunteer service to the tiny settlement, to the village and then the incorporated town its members loved because it was home. It has meant danger bravely faced. And cold. And discomfort. And standing in readiness. And hurrying from daily duties to answer this, the first call of duty.

Away back in 1890 a volunteer group of firemen was organized. There were twenty-four members, and the name chosen by them was "The Clark Hose Company." Mr. Joe Englewood (now retired and living in Pocatello, Idaho) was the first Fire Chief. He was later succeeded by Mr. Joseph Iredale, whose Assistant Chief was Mr. Jesse James. The first equipment consisted of a hand-drawn hose reel and 500 feet of hose, which last was donated by Mr. D. O. Clark, then General Manager, Coal Department, Union Pacific Railway. The Fire Station was located at Fifth and K streets in a small shed

ten feet by ten feet. Meetings of members were held above the Dawes Drug Store on South Front street, where now is the Yellowstone Hotel.

Later, in 1892, more pretentious quarters were secured for the fire service, the town renting the building now used by the O'Donnell Meat Market. And in 1893 the town of Rock Springs purchased a double tank chemical engine. Thus was started organized fire-fighting service with equipment.

In those early days the fire alarm was given by the time whistle of No. 1 Mine, and it was difficult indeed for the firemen to locate the fire. Fire Chief Forndran recalls that when, in 1892, No. 4 Mine was on fire, the alarm was given in the night, but the men could not locate any blaze or smoke. They went home and were again called, this time finding the fire and succeeding in rescuing thirty mules from the mine by the use of a block and tackle.

A truly Western method of taking fire hose to the nearest hydrant was in vogue at this time. A horseback rider would tie the end of the hose to his saddle horn, give his horse the spurs, while someone adjusted the reel. The hose would be at the fire first. Firemen rode bicycles, and it is interesting to relate that some of the members of the early fire organization remember when there were eighteen hundred bicycles in the city.

The "W. K. Lee Volunteer Fire Company" succeeded, with the same membership, "The Clark Hose Company" and a most interesting and well-kept "Minute Book" records the doings of this organization, which served from 1897 until the establishment of the Fire Department of



Members of Rock Springs' Volunteer Fire Department in 1891, with their cherished equipment, a chemical engine and a four-wheeled hose carriage. Reading from left to right, they are: Charlie Warren, now with the McCurtain Motor Co.; Chris Johnson, now Master Mechanic at Cumberland; Eric Sweetland, residing in South Dakota; Jesse James, who used to be blacksmith at No. 1 Mine (deceased); Jim Ross (deceased); Jim Ward, brother of Sam Ward, merchant, Rock Springs; Chris Bunning, Mayor of Rock Springs; Tony Michaleson; Tommy Powers (deceased); Nels Hansen; John Forndran, present Chief, Rock Springs' Fire Department; Pete Eimer (deceased); Joseph Iredale.

And, mounted on the equipment, are: Eric Sweedene, William Iredale, of the State Law Enforcement Department, and Bill Forndran, now of Seattle.



The way members of the Fire Department went to a fire in the old days. From left to right these gentlemen are: Mr. Andrew Riddle, now superintendent of C. F. & I. mines at Valdale, Colorado, and Mr. Joseph Iredale of Rock Springs.

the city of Rock Springs. It's apropos of February and our thinking, even if it is telling tales out of—the Minute Book, to record that the February minutes of the early 90's registers instructions to "every fireman present to go to the Opera House tonight and help decorate the hall for the dance on Washington's Birthday."

The Gamewell Fire Alarm System was installed with

eight street boxes. Now there are twenty-nine street boxes.

"Big fires" and the nights and days of big fires live in the memory of these men who fought them and saved the homes of the town. In 1894 the Edgar Opera House burned, it having been located where now is the Grand Theater. And in 1897 the Wyoming General Hospital burned to the ground, the patients being saved and removed to the City Hall, which continued to be used for the sick until the hospital was rebuilt.

The present Chief, Mr. J. E. Forndran, was chosen Chief by the "W. K. Lee Volunteer Fire Company" and has thus served the city of Rock Springs ever since. He can tell about the "big fires" and strenuous fights, and about other things, too. Listen to his telling of the banquet-fire night.

"It was in 1900. The firemen were serving a banquet in their own hall over the apparatus room (the city was bonded to build the present City Hall in 1895) and the banquet was almost ready to be served when the fire alarm sounded. We were in our dress clothes and the fire was in No. 1 slope. We worked for two hours before we got the fire under control. But when we did we went home, changed our clothes, found our wives and sweethearts and started the party all over again. It was enjoyed by all present." Perhaps the Mayor helped keep it hot. At least he probably had a lot to do with seeing that "it was enjoyed by all present."

In 1904 the fire organization was changed from a volunteer organization to a partly paid one, and was named the "City of Rock Springs Fire Department." In 1923 the city built a new Fire Station on Pilot Butte Avenue, which is valued at \$12,000, other equipment being valued at \$20,000. There are three drivers constantly on duty and twelve men trained and ready to respond to the whistle.

Chief Forndran's seventeen-year-old daughter, Mary, is his chauffeur and drives the Chief's car to all night calls. Regardless of hour or weather, Mary is ready when the gong sounds and serves as faithfully as any member in



City of Rock Springs' Fire Department, pictured January 8, 1928. Reading from left to right, the members are, bottom row: J. F. Antwieler, Isaac Roberts, Jr., James H. Roberts, Paul Cazin, Charles Manley, Walter Taver, Sam Ramsay, William McTee, Henry Heites, Gus Stavran, Andy Babinchak, Mary Forndran, Chief John Forndran.

Mounted at the extreme left are: P. T. Tronquet and Mike Dankowski.



John E. Forndran, Chief, City Fire Department, Rock Springs, when he was Assistant Chief back in 1892.

this strenuous, urgent and watchful service to the city of Rock Springs.

Messrs. M. J. Dankowski, Sam Ramsay and Henry Heitz are the oldest members in point of service. Mr. Dankowski, who serves the fishermen of the town with tackle and fishing baskets when he isn't fighting fires, is Assistant Chief. Mr. James Roberts is the fun-maker of the group, a duty in which he is ably assisted by Paul Cazin, member of the Rialto Theater Orchestra and director of Paul's Junior Syncopators.

News of the Safe Arrival of the Four Old Chinamen

The story of the return to their homeland of four old employes of The Union Pacific Coal company was told in the December number of the Employees' Magazine. The following letter, telling of their safe arrival at Hong Kong, has been received:

Hong Kong, 9th December, 1927.

The Manager,
Union Pacific Coal Co.,
U. S. A.

Dear Sir:

We beg to express our heartfelt thanks for your kindness that you have been so good to pay us money to return home.

We have now arrived Hong Kong safely on the 6th inst.

Thanking very much for your anticipation.

Yours obediently,

Ah Jin.

Ah Chee.

Ah Him.

Ah Bow.

Old Timer Samuel Samuels of Rock Springs

Seventy years old and neither a gray hair nor any visible decline in the beauty of a "crown" that must have earned him the title of the Welsh equivalent to "Pinky," is one of the records of Mr. Samuel Samuels, member of the Rock Springs unit of the Old Timers' Association. He has many another record.

Born in the coal mining section of North Wales, Mr. Samuels came to the United States, bringing his family with him, in 1907. He sailed from Liverpool on March 27th, and on April 12th went to work for The Union Pacific Coal Company in No. 9 Mine. In Wales and America he has worked in the mines for fifty-seven years, since he began when he was but thirteen years old.

Mr. Samuels is a member of the Episcopal Church and has not missed a service for twenty years except when work kept him away. His is a family of singers, and in the choir of his church he has three sons, three daughters-in-law, three daughters, two granddaughters and one grandson. It was his granddaughter, Mrs. Martha Samuels Buston, who won the state medal in the Atwater Kent singing contest and who represented Wyoming in the national contest with such credit.

Mr. Samuels has seven children, thirty grandchildren and one great-grandchild. His sons are: William, George, Edward, all of Rock Springs; and his daughters, Mrs. James Knox, Mrs. J. Edwards, Mrs. D. McIntosh and Mrs. J. Lawson.

And all his records sit, like the record of his years, but lightly on this cheerful, busy and interesting citizen of Rock Springs.



Old Timer Samuel Samuels, Mr. Wm. Samuels, Mrs. Martha Samuels Buston and Master Carl Buston. Four generations resident in Rock Springs.

Carbon

O, Carbon, how we loved you, forty years ago today;
No one dream't, old Carbon, that you weren't on the
map to stay.

You were prosperous and thriving, and the people held
their own;
Who could tell them that today you'd be standing there
alone?

Bright lights glittered in the night-time, and the days
were busy, too;
Dark clouds always slighted Carbon, and her skies were
always blue!
Such a jovial crowd of pioneers were very seldom found—
And they'd braved the wilderness of the West to old
Wyoming's ground.

Snows or Indians could not scare them, for they had a
world of grit;
This frontier life held charm—for heroes do not quit.
There you know'd everybody, and they all know'd you;
No one cared a penny what the other one would do.

The women dressed in calico, the men wore old-time
jeans;
All of them were genuine and lived within their means.
They traveled with a team and rig—autos were unknown;
And just imagine these plain folks talking o'er a phone!

They hadn't any phonograph, but danced after a fiddle;
The halls were always crowded—where they came from
was a riddle.
They danced old-fashioned steps and sang old-fashioned
tunes,
And they strolled in the silvery light of real old-fashioned
moons.

Times have changed beyond description, and they have
scattered one and all;
Some have gone to other countries, some have gone
beyond recall.
And Carbon, you are shattered; you are dead, you are
no more,
And the sight of you, dear Carbon, makes our heart
ache to the core.

When we go to where you flourished, our spirits are
depressed,
To think this hopeless wreck of now was once the very
best.
Your houses are all tumbling down, the windows are
broken out,
The doors are standing there ajar, the gophers run
about.

The streets are full of tumble weeds, the bridges have
fallen in,
And quiet reigns where at one time was industry and din;
The coyotes come within the wreck of this down-trodden
place,
And howl in cheerless, mournful tones—there's no one
to give chase.

The sly jack-rabbits rack away and hide 'mid the ruins
there,
And o'er the whole of Carbon now is the attitude of
despair;
The sagebrush flat is just as green, the hills slope toward
the sky,
And Carbon now reminds us of the fact that all things die.

It used to be that spring winds made music in the air,
But now the night winds sob and sigh around the chim-
neys bare;
Out on the side hill north of town, a silent city lies,

Where monuments and blocks of stone among the graves
arise.

'Tis here that old-time Carbonites return to add another,
For here are resting old and young, the baby and the
mother.

'Tis here that many pioneers of these old times are sleep-
ing;
'Tis here that some good angel o'er the dead a watch is
keeping.

So fare you well, old Carbon, you are crumbling to the
dust,
And our hearts ache at your downfall—which we cannot
think is just;
And although you're past redemption, still we reverence
your name,
And always, dear old Carbon, we will love you just the
same.
—From Hanna Pioneer.

Charlie Thomas: "What kind of watch have you got?"
Tom Gaffney: "A wonder watch."
Thomas: "Wonder watch! Never heard of that kind
before."
Gaffney: "Well you see, it's this way. Every time I
look at it I wonder what time it is."

Large Donation Given to Wash- ington University

(Continued from page 68)

sacred instrument to the great danger to them, as future
citizens, of contracting from alien sources, before their
minds were formed, principles unfriendly to republican
government and to the true and genuine liberties of
mankind, which thereafter are rarely overcome; and,

"Whereas, Before such an institution could be brought
into being the securities so set apart by him had depre-
ciated to such an extent to defeat the plan and purpose
of the testator * * *."

An enormous gift to Washington University with
which to establish a School of Government is of the utmost
import. That it is given as a memorial to Washington
adds the historical significance, stability and spirit without
which things educational do not thrive permanently.

The Fairy's Valentine

I saw a little elf
Who was sitting by himself
In a hollow that was warm and sunny.
He had cut a little pen
Of a feather of a wren
And he dipped it into golden honey.

And he wrote with all his might:
"Oh, my darling little sprite,
You are sweeter than the clover
That the bee is buzzing over,
And I love you, I adore you,
And I'm always longing for you,
And you're always growing dearer
And I wish that you were nearer.
I can think of nothing clever,
But I'm yours, and yours forever,
If you wish it so or not!"
And he ended with a blot.

Then I copied out his letter
(As I couldn't write a better),
And I'm signing it and sending it to you,
For it's true!

—Arthur Guiterman.

Laughs

Another One

In the end the tall, lean man, it seemed, took pity on the stamping conductor and the thrilled passengers.

"It's nae use your-rr fumblin' any longer, MacGr-r-r-e-gor," he said to his friend. "Ye may just make up your mind to pay the conductor. Both my arms are paralyzed."—Dublin Opinion.

The Objective

A pair of owls came down the chimney into the sitting-room of a Kent schoolmaster. We understand that they exasperated him by repeatedly saying, "To who" instead of "To whom."—London Opinion.

Empty-Handed

Judge: "Have you anything to offer to the court before sentence is passed on you?"

Prisoner: "No, judge. I had ten dollars, but my lawyer took that."—Presbyterian Advance.

'Omeopathic

Complained a member of Parliament to a well-known British peer: "I've got a 'orrible 'eadache. What would you prescribe?"

"A couple of aspirates," was the prompt answer.—Boston Transcript.

Too Much

Farmer: "Why aren't you busy? Can't you find something to do?"

Hired Boy: "Gee whiz! Have I gotta hunt up work and then do it, too?"

Impossible

The Boss: "Robert, I hope you try to save half of what you earn."

Office Boy: "I don't get that much, sir."—Boston Globe.

Fully Explained

Jones of the class of '26 had gone home, framed his diploma, and had opened up a law office. His father dropped in on him about four one afternoon, and asked how things were starting off.

"Well," said the young man, "practically no one comes in in the morning, and the rush falls off a bit in the afternoon."—Clipped.

Faking It

Even the grave and dignified British Civil Service Commissioners could not resist being amused at an answer given in a recent examination to the question: "Give for any one year the number of bales of cotton exported from the United States."

The applicant wrote: "1491. None."

A Definition

An optimist is a tourist who starts out with poor brakes, no spare, and a knock in the motor, and who wires 250 miles ahead for hotel reservations.

A Perfect Antique

"What do you mean by selling me such a bird?" asked the irate customer.

"Why, was there anything wrong?"

"Wrong? It wasn't good at all!"

"Well, it ought to have been. It won first prize in the poultry show 11 years in succession."

No Sale

A hardware clerk was trying to talk a farmer into buying a bicycle. "They're good and cheap now," urged the clerk, "and they won't eat their heads off when not in use. You'd find one mighty handy to ride around on your farm. I can sell you this one for \$35."

"Thirty-five dollars! I'd rather put the money into a cow."

"But you'd look foolish riding a cow about your farm."

"No more so than milking a bicycle."—Pacific Coast Bulletin.

Turning the Tables

It suddenly occurred to the small Boy Scout that he had neglected to perform his daily good deed. He approached the infirm old lady on the corner.

"May I accompany you across this busy corner, ma'am?" he asked.

"Why of course you can, you poor little fellow," she beamed. "How long have you been waiting for somebody to take you across?"

An Ideal Place

"Is this a healthful town?" asked a stranger.

"It most certainly is," replied the native. "When I came here I couldn't utter a word, I had scarcely a hair on my head, I hadn't the strength to walk across the room and had to be lifted from my bed."

"That is wonderful," exclaimed the stranger, "how long have you lived here?"

"I was born here," was the reply.

No Good

"I want to return this book, 'Stories For All Occasions,' I bought from you yesterday."

"Why, what's wrong with it?"

"There's nothing in it for a fellow to tell his sweetie when he's been caught out with another girl."

Remember This One

"I suppose you will want me to give up my job, Henry, when we are married."

"How much do you earn at it?"

"Sixty a week."

"That isn't a job. That's a career. I wouldn't want to interfere with your career, girlie."—Louisville Courier.

Explanation Was Too Revealing

"Dear, I can't get home tonight. I have an engagement with Blinks."

"Who?"

"Blinks, dear."

"Say it again, John."

"Blinks. B for Bess, L for Lucy, I for Irma, N for Nancy, K for Kate — — —"

"That will do, John. You'd better come home in two minutes."—Bell Telephone News.

Queer

One of the two girls was glancing over a man's shoulder at a newspaper.

"I see," she said, "That Mr. So and So, the octogenarian is dead. Now, what on earth is an octogenarian, anyhow?"

"I'm sure I haven't the slightest idea," answered her friend, "but they're an awful sickly lot. You never hear of one but he's dying."

— Of Interest To Women —

The Gettysburg Address-- How It Came to Me

"It is rather for us to be here dedicated to the great task remaining before us."

Mrs. Emily Pankhurst, ultra feminist, rabid platformist and worker for "votes for women," fearless leader of the British Woman's Party, front page headliner whose smallest action or expression of opinion was news; feared of statesmen, parliamentarians and politicians of the British Empire, was coming to our city. I remember my utter astonishment when I saw on the platform of a crowded auditorium, a tiny, quietly though fashionably dressed, gentlewoman with a quiet, beautifully modulated voice, who talked with the graceful persuasion of well-thought-out arguments, but with none of the belligerence the press of the day had led one to expect.

The specific issues she discussed I've forgotten, if indeed I could have known much about them. But the entire earnestness of the speaker as she quietly, but none the less forcefully, answered the most facetious questions, held me. "Was it true that Premier Lloyd George has slid out of the back door after a campaign speech in order to avoid committing himself to a statement of policy on 'votes for women'?" "Did she think throwing missiles and going on hunger strikes permissible?" And her answers, patiently given, were always that anything to gain this end—votes for women—was permissible. Her expression of sureness that this was the all-important need of the hour absorbed her. All her brilliancy as a speaker, all her sparkling wit and sympathetic sense of humor, she used to teach this.

* * * * *

Two years afterward I heard her again on the same platform. Now her country was at war. She spoke for one of the funds for the relief of an allied country. A representative of that country accompanied her. Her ancient enemy, the Premier, was War Premier. Now he was using countless thousands of women as munition workers, countless homemakers as hospital workers, countless nurses and clerks on the battle fronts, countless ambulance drivers daily, hourly, facing and sharing the dangers of the battlefields. Might she not have said, "I told you so. The country needs the service of its women."

She didn't. She told instead of the need of self-sacrificing help, of the bravery of the Allies, of sacrifices being made in the Old Lands, all her picturing ability bent now to making her audience see her country at war.

Then someone asked: "Will England give her women the vote after this?" Calmly, with the forced calm of the speaker who must endure an irrelevant subject, she looked at the questioner. Then, brushing it aside entirely, she said: "The question is not whether she shall give her women the vote, but whether or not she shall have a country to vote in."

And pounding through my memory came another story as resoundingly came the words I'd once memorized:

"It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolved that these dead shall not have died in vain."

Caring for Children's Teeth

By Dr. H. A. O'Malley, Rock Springs.

The mouth is the gateway to all the digestive organs of the body. Through it passes all food, the nourishment supply. In order, then, to have a healthy system, the mouth must be in a healthy condition. The teeth must be in such a state that they can thoroughly masticate the food and prepare it for proper digestion.

The cause of under-weight in children can often be traced to an unhealthy mouth.

The first or temporary set of teeth start to erupt when the child is about six months, and are completed around the age of two and one-half years. When fully arrived, the child has twenty teeth in the temporary set of "baby teeth," ten in the upper jaw and ten down below. During this period the mother should watch closely the child's habits in regard to lip biting and thumb or finger sucking. These habits may result in an irregular mouth or in an enlargement of the tonsils and adenoids.

The child's most important and most neglected tooth is the permanent molar, often called six-year molars. They arrive when the child is about six years of age, coming in back of the primary set without causing any loss to them, and are often regarded as temporary teeth.

As much care, however, should be given the first dentition as the second. Children should brush their teeth after every meal from their babyhood. The temporary set of teeth aid in the proper development of the jaws in guiding the permanent ones into correct position.

Children should not wait until a toothache prompts a visit to the family dentist, but visits for examination should be made at regular intervals. Often later pain will be spared them, as well as a future fear of the dental chair.

Diet plays an important part in controlling or causing decay of the teeth. Soft foods should be eliminated to a great extent. Harder foods cleanse the teeth and require a greater amount of chewing on the child's part. This not only aids in digestion, but furnishes exercise for the jaws and gums, so aiding their proper development. Sugar should be cut down and used only in connection with other foods. Rich, starchy, sugary foods adhere closely to the teeth and unless vigorous care is given, result in decay.

More acids should be included in the diet. An apple or orange following the meal are beneficial by increasing the flow of saliva. Hard bread is also very good. Foods such as spinach, which contain calcium salts, are good as bone builders and contribute to the structure of the teeth.

Every mother should take very seriously the care of her child's teeth. It not only means better health and physical development but, in later years, good teeth are a certain mark of beauty.

The teeth are one of our most prominent features. Various movie stars have been quoted as saying when giving advice to Young America, desirous of "making the movies," that it is impossible to succeed in filmdom without a good set of teeth.

Be that as it may, it is certain that good, regular, well-cared-for teeth are something very much to be desired, and something the mother can help her child to have.

—≡ Girls All Girls ≡—

Why Be a Girl Scout Leader?

PLENTY and much has been written on the subject of Girl Scout Leadership. But if you were to ask the leader why she is one, she'd be almost sure to say: "Why, because I like to be." Of course, her answer will vary in form, but basically it will be just that—"because I like it."

She likes girls, has most likely herself belonged to some of the girls' organizations emphasizing outdoor fun and enjoys a continuance of that, enjoys the mental stimulus of an association with eager growing minds. But most of all and without analyzing it—because she likes girls and enjoys being with them. Certainly understandable, girls are so lovable. Then she has what might be termed a constructive habit of mind and, being a few years further along the road of life, having gained the experiences of the road, she shares these experiences, guide posts to the paths to follow or avoid.

Listen to any counsellor talking to a group of Senior Scouts on a hillside at camp or seeking a corner or shady spot for "quiet hour." "What college would you go to for —?" "Is — a difficult subject?" "Do you have fun?" "Tell us about your fudge party." "What did you call your stunts, 'phenomenal pheats and phancies?'" Or listen to the little girl discussing High School with the senior. I well remember a little camper saying to her counsellor, a High School student she admired: "Oh, Phil, stay in High School till I get there," then squealing with delight because someone had hit on the name, "Gigantic Gawky Goofs" for the stunt they were planning.

Or the leader is often a mother who wishes the training for her own daughter and is willing to give her time to it for all the others. One leader in our district is herself the mother of three Scouts. She knows that ideals make men and women, and that the process of ideal making begins in childhood. And—more, ideal making must extend to the group in order to be effective.

But whether the leader be mother or teacher or older friend, she is one because she likes to be. And certainly her reward of enthusiastic young friendships is very real and worth while.

Dolly Madison

"Everyone loves Mrs. Madison. Mrs. Madison loves everyone." This statement of Henry Clay and the answer of the popular Dolly Madison have been everlastingly written on the pages of history and contain a psychological truth worth thinking about.

And while everybody is recalling the heroes of our country and February is, we'll all agree, a very patriotic month, isn't it fair enough that we girls consider one of America's most gracious women?

Dorothy Madison is remembered as Dolly Madison, the most popular of the "ladies of the White House." She was the daughter of John Payne, a North Carolina planter. Her parents moved to Philadelphia, her father having sold his plantation and freed his slaves. When she was nineteen years old she married John Todd, a wealthy lawyer. She had two children, but a few years after her marriage she lost her husband and baby in an epidemic of yellow fever.

She was beautiful, and as a rich and very attractive young widow she was courted by many admirers. Among them was a member of Congress, James Madison. They were married at the home of Dolly's sister and, through

more than forty years of married life, had an unusually happy home.

When Madison became President in 1809 his wife showed an unusual fitness for her position. Gracious, beautiful, witty, adaptable, she graced her queenly position as few queens have done.

She was an excellent counsellor for her husband, who prized her common sense, sound judgment and opinions, seeking her solution for puzzling questions. During President Madison's administration she was said to be a political force. She undoubtedly was the country's most popular citizen.

She lived thirteen years after the death of her husband, who was much older than she.

During the presidency of Theodore Roosevelt, Miss Alice Roosevelt (Mrs. Nicholas Longworth) was sometimes compared to the beautiful Dolly, who is described by Sarah Bolton as the girl who "won the heart of the nation, whose loveliness of disposition and cheerful, helpful nature were only equalled by her beauty and her grace."

Sand

I observed a locomotive in the railroad yards one day,
It was waiting in the roundhouse where the locomotives
stay;

It was panting for the journey, it was coaled and fully
manned,

And it had a box the fireman was filling full of sand.

It appears that locomotives cannot always get a grip
On their slender iron pavement, 'cause the wheels are
apt to slip;

And when they reach a slippery spot their tactics they
command,

And to get a grip upon the rail they sprinkle it with sand.

It's about the way with travel along Life's slippery track,
If your load is rather heavy you're always slipping back;
So, if a common locomotive you completely understand,
You'll provide yourself in starting with a good supply
of sand.

If your track is steep and hilly, and you have a heavy
grade,

And those who've gone before you have the rails quite
slippery made;

If you ever reach the summit of the upper table land,
You'll find you'll have to do it with a liberal use of sand.

If you strike some frigid weather and discover to your
cost,

That you're liable to slip up on a heavy coat of frost,
Then some prompt decided action will be called into
demand,

And you'll slip 'way to the bottom if you haven't any sand.

You can get to any station that is on Life's schedule seen
If there's fire beneath the boiler of Ambition's strong
machine,

And you'll reach a place called Flushtown at a rate of
speed that's grand

If for all the slippery places you've a good supply of sand.

Superior Climbers' New Troop Song

Remember the Camp favorite song, "Colored Sunday School"? Here is the new song the Climbers have written to the same tune with Poetess Augusta to keep the meter true:

I

Young Scouts, old Scouts, every Scout may come,
Visit with the Climber Troop and have a lot of fun;
Check your pack of frowns and sighs,
Your troubles at the door,
And you'll have a lot of jolly times
You never had before.

II

Our Captain is a jolly one—
The best that you can find;
She helps us in our Girl Scout work,
And we are glad to mind.
Though we were once Tenderfoot, 'tis true,
She 'lows that we will win
More merit pins than you.

(Sing first verse over.)

III

Our Arrows are a peppy group,
Ever staunch and true;
No matter what your trouble is,
They'll always help you through.
Though in numbers they are very few,
Every single one of them
Is Girl Scout through and through.
(First verse again.)

IV

Then there's the group that is
Called the Silver Wings,
And, like the Arrows, they
Are always doing things.
These girls, too, stand by through thick and thin,
And put into our Girl Scout Troop
Punch and pep and vim.
(First verse again.)

V

Off in Rock Springs lives the Owlette Troop,
And to give them credit due,
They are a good Scout group;
But, all in all, they can't begin to be
Half as **PEPPY** as the Climbers, who
Make **PEP** a specialty.

(First verse again.)

There Was Once a Girl Who Said

"I shall never marry a man who smokes tobacco in any form."

Her husband is wedded to a pipe.

"All I care about is intellect."

She married a prize-fighter.

"Give me a successful business man."

She married a poet.

"If a man is just and honest; it is all I ask."

She married a swindler.

"After all, money isn't the only thing."

She married a millionaire.

"These bookish men are such awful bores."

She married a popular novelist.

"I don't believe in divorce."

She married a film star.

"I can't stand these big, brainy men who know every thing."

She married me.—London Opinion.

Our Little Folks

The Bishop and the Convict

From Victor Hugo's "Les Misérables."

IN A certain town in France there lived a very good bishop who cared nothing about wealth or worldly pleasures, but only about doing good and helping others to be good. He gave most of his earnings to those who were in need; whereas he himself lived almost in poverty. He had all the locks taken from the doors and windows of the little house in which he dwelt, so that everyone could enter at any hour, and whoever did enter was made welcome. In a word, he loved all who were poor or unfortunate, and he devoted his life to helping them.

One treasure, and one only, this good bishop had: a set of silver knives and forks, with two tall candlesticks to match. These he used only on great occasions; and had it not been for those articles, anyone entering the bishop's home would have thought himself in the house of a poor laborer.

On a certain evening in October, just before sunset, when a cold wind was beginning to blow down from the high mountains that surrounded the little town, a poor, tired-looking stranger, with a knapsack on his back, entered the village. The traveler carried a yellow passport, which indicated that the man had been a convict, and was now released from prison after many years of hard servitude.

The instant people saw the color of the paper the stranger carried they shrugged their shoulders and turned away from him. Soon the news spread throughout the place that a dangerous criminal was abroad in the town. Wherever poor Jean went his reputation had gone before him. So, although he had money to pay for his food and bed, none of the innkeepers would give him a night's lodging; and when he knocked at a private house for admittance, the people drew the bolts across their doors, and closed the shutters in his face.

Now Jean had not been a very wicked man, though he had been nineteen years in prison. He had been sent there for trying to steal a loaf of bread, not for himself, but for seven little starving children who cried to him for food. Often he had tried to escape and get back to those helpless ones who needed him so much; and each time he had been caught, and forced to stay in prison all the longer.

The cruelty of the treatment he had received in all those years, and the hard-heartedness of the people around him, were fast making him hate

all his fellow-men; and when a man hates other people, he is likely to become truly wicked.

This windy night, when he was turned away from every door at which he knocked, Jean's heart was full of bitterness, and he felt that the world was a very cruel place. At last a woman, who saw him sitting on the cold stones, took pity on him and told him to go to a little door at the corner of the street and there knock for admittance.

That door was the bishop's; and in the little room within, the bishop and his sister, together with their one servant, were just about to sit down to their simple meal. Even here there had come rumors of the prisoner who was in the town; and the bishop's servant was just expressing her alarm because there were no locks on any of the doors, when there came a knock at that very street door.

"Come in," cried the bishop, and in came a tired, hungry, dangerous-looking tramp, at whose appearance the two women started back in fright. Poor Jean was, by this time, almost desperate; and with an ugly look on his face, he started to tell the story of who he was, and how he had been turned away from every door. But the good bishop hardly waited to listen to the tale. Here was a man in need; that was all that concerned him.

So, speaking gently to Jean, as though he regarded him more as fellow-man than as released convict, he asked him to warm himself by the fire while the servant set another place at the table. Moreover, in honor of his guest, the bishop ordered the silver knives and forks and candlesticks to be put on the table.

Jean did not know what to make of such treatment. Never in his life had he met anyone like this man. It was impossible to hate him, even though he was well on the way to hating everybody. Of course, Jean had no idea his host was a bishop. All the bishops he had ever heard of lived in fine houses, and had the best of everything; while this house was plainly a poor man's dwelling.

So Jean was puzzled. He ate his supper in silence, and had very little to say when, after dark, the bishop led him into his bedroom, and told him he was to sleep in the bed with the soft, white sheets. It was the bishop's own bed, and he himself intended to rest in his altar room, where he always slept when there was a guest in the house.

On his way through this altar room to his bedroom, Jean had noticed the servant putting away into a little cupboard the silver which had been taken out in honor of the guest. At the time, Jean had given the matter no second thought; and in a few moments, all dressed as he was, he had fallen fast asleep. It was the first time in nineteen years that he had slept in a bed.

Soon the others, too, were asleep, and quiet and peace reigned in the bishop's home.

A little after midnight Jean awoke, and there flashed into his mind the picture of the silver in the cupboard at the head of the bishop's bed. All the evil that nineteen years of hardship had put into this man's mind came rushing to the front. He arose, and, without putting on his shoes, crept on tiptoe to the door between his bed and the bishop's room. It was ajar; and the next moment Jean noiselessly entered the room.

As he stood there, silent, suddenly the moon broke from behind the clouds, and poured its full radiance into the room; and there on the bed, the convict saw the old white-haired bishop sleeping peacefully. One might think that the sight of that beautiful old man, who had been so kind to him, would have changed Jean's purpose. But, no; he crept on, with stealthy steps, toward the cupboard, keeping his look fixed upon the bishop.

There was no sound from the sleeper, while Jean opened the cupboard, took out the basket of silver knives and forks, and then, as stealthily as he had come, crept back into his room. Once there, he hurriedly put on his shoes, seized his knapsack, and escaped out of the open window into the garden, over the wall, and away in the darkness.

The next morning the bishop awoke and found his guest gone. In the garden lay the empty basket which had held his silver knives and forks; but when his servant came rushing out to him with the startling news that the silver was gone, the bishop only smiled and said quietly, "I have been thinking for a long time that I had no right to keep the silver, but should have given it to the poor. Certainly our guest last night was poor, so all is well. And that was all he would say about the matter.

But just as the bishop and his sister were about to sit down to their simple breakfast, there came a loud knock at the door. When it was opened, in bustled two officers of the law, half dragging between them the frightened Jean, who had been caught with the silver as he was hastening out of the town. He had told his captors a confused story about having passed the night with the bishop, who, he said, had given him the silver.

The bishop looked up quietly when the three men entered, and then smiled at poor, frightened Jean, who already saw himself back to the hated prison. "Ah," said the bishop, before the officers had a chance to speak, "I am glad you have come back, my friend. You forgot the candlesticks, which I gave you with the other silver."

When he heard these words, Jean thought he must be dreaming. But the officers at once released him, merely saying, "So, his story, then, was true?" They were very much surprised, since everyone in the town knew the bishop, and how different his actions were from those of other people.

As soon as the officers were gone, the bishop turned to Jean, saying: "My friend, in return for

the silver I have given you, you must promise in future to do only good, never evil. Now, go in peace."

Jean turned away, so bewildered that he scarcely knew where he was going or what had happened. It was a long time before he realized the great influence of this experience on his life. For the meeting with the bishop rekindled in Jean's heart the dying sparks of a noble nature; and the remembrance of the bishop's kindness and greatness of heart made a different man of him.

Jean traveled far away. At length, one night, as he entered a village, he saw a building on fire, and rushing through the flames, at the risk of his own life, saved two children from a terrible death. Because of this brave deed the people welcomed him in their midst, without thinking of asking him for his passport.

Now Jean had a very fine mind, and one day he hit upon an invention that procured him a large fortune, and at the same time opened to the town a new industry, which added greatly to the prosperity of all the people.

Jean used his wealth to build hospitals, schools and orphan asylums, and never lost an opportunity of helping the poor and the unfortunate. After a while the people grew to love him so dearly that they made him mayor of their town.

Even after this, Jean had many misfortunes to endure, which you will find related in Victor Hugo's great book, "Les Miserables." Yet, though he was often treated with injustice, he never again hated his fellow-men, but, following the bishop's example, tried always to return kindness for evil.

If ever he felt tempted to do anything wrong, he remembered the bishop's parting words, and the promise the good man had asked him to make. So, in course of time, his character grew strong and beautiful, until at length he became capable of deeds as fine and self-sacrificing as those of the bishop himself, the friend who had first shown to him, the released convict, how noble a man could be.

"As one lamp lights another, nor grows less,
So nobleness enkindleth nobleness."

Training for the Presidency

"I meant to take good care of your book, Mr. Crawford," said the boy, "but I've damaged it a good deal without intending to, and now I want to make it right with you. What shall I do to make it good?"

"Why, what happened to it, Abe?" asked the rich farmer, as he took the copy of Weems' "Life of Washington," which he had lent young Lincoln, and looked at the stained leaves and warped binding. "It looks as if it had been out through all last night's storm. How came you to forget, and leave it out to soak?"

"It was this way, Mr. Crawford," replied Abe. "I sat up late to read it, and when I went to bed I put it away carefully in my bookcase, as I call it, a little opening between two logs in the wall of our cabin. I dreamed about General Washington all night. When I woke up I took it out to read a page or two before I did the chores, and you can't imagine how I felt when I found it in this shape. It seems that the mud-daubing had got out of the weather side of that crack, and the rain must have dripped on it three or four hours before I took it out. I'm sorry, Mr. Crawford, and want to fix it up with you, if you can tell me how, for I have not got money to pay for it."

"Well," said Mr. Crawford, "come and shuck corn three days, and the book's yours."

Had Mr. Crawford told young Abraham Lincoln that he had fallen heir to a fortune, the boy could hardly have felt more elated. Shuck corn only three days, and earn the book that told all about his greatest hero!

"I don't intend to shuck corn, split rails, and the like always," he told Mrs. Crawford, after he had read the volume. "I'm going to fit myself for a profession."

"Why, what do you want to be, now?" asked Mrs. Crawford in surprise.

"Oh, I'll be President!" said Abe with a smile.

"You'd make a pretty President with all your tricks and jokes, now, wouldn't you?" said the farmer's wife.

"Oh, I'll study and get ready," replied the boy, "and then maybe the chance will come."

Rock Springs Drug Co., Inc.

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Rock Springs, Wyo.

JOSEPH SCHOTT

Paint, Oil, Glass and
Builders' Hardware



Stoves and Kitchen Utensils

128 K Street

News About All of Us

Rock Springs

Frank Vercinak of Lyman is visiting at the home of Mr. and Mrs. Mike Palko.

Mrs. F. L. McCarty and daughter Carol have returned from a month's visit in Southern California.

Alfred Robertson, who was injured in No. 8 Mine last August, has now recovered and has returned to his work.

Margaret Plemel, assistant bookkeeper at the Company Store, has returned to work after a three weeks' illness.

A. T. Henkell has purchased a new Hudson Coach.

Babies have been born to the following families: Mr. and Mrs. Bernard Todd, a son on December 23rd; Mr. and Mrs. A. C. Carter, a daughter on January 2nd, and Mr. and Mrs. H. L. Mooney, a daughter on January 2nd.

Robert Muir expects to leave on January 17th for an extended visit in California.

Joe Stekola is confined to the Wyoming General Hospital, where he is recovering from injuries received in No. 4 Mine on January 4th.

John G. McKing and Carl Sinclair of the Roebing Rope Co., at Denver, were business visitors at the Mine Office on Monday, January 16th.

Robert, son of Mr. and Mrs. Charles Outsen, has returned to school at Laramie after having spent the holidays here with relatives.

F. Delauranti was injured in No. 4 Mine on Friday, January 13th.

Mr. and Mrs. Wendell Clark of Superior visited with friends here on Sunday, January 15th.

George Moore is confined to his home on the West Flat with an attack of the flu.

Dr. H. J. Arbogast left for California on Thursday, January 5th, where he will visit with Mrs. Arbogast and their baby daughter, who are spending the winter there.

F. B. McVicar motored to Lyman Friday evening, January 13th, and witnessed the basketball game between Lyman and Rock Springs.

David Wilde is confined to his home on Eleventh street, recovering from injuries received while at work in No. 8 Mine on January 12th.

John Byers has been called to Georgia by the death of his father, which occurred the latter part of December.

Mr. and Mrs. J. A. Williams are receiving congratulations on the arrival of a baby boy at the Wyoming General Hospital on December 3rd.

Mr. and Mrs. Thomas Overy motored to Winton on Sunday, January 15th, where they visited with their daughter, Mrs. James Herd.

Reliance

The annual children's party given by the Woman's Club for the young folks of town was a happy event of the holiday season. Prizes for the various games were won by Mackie Green, Mary Elitch, Boyd Marshall and Catherine McComas. Lila Sturholm played the piano for dancing. Mrs. Medill provided a treat for everybody, and some one hundred children were in attendance. This is the third year this club has arranged an afternoon party for the children of Reliance and it is now a looked-for event.

The marriage of Miss Mildred Hoback and Mr. James Sellers was quietly solemnized at Green River recently. Mrs. Sellers will continue to carry her classwork at the Reliance school.

Florence McPhie has been quite ill, but is now convalescent.

Lena Badjot is also on the sick list.

Rose Flower & Gift Shop

BYRON DAY, Prop.

First National Bank Court, Opposite Skaggs
Rock Springs, Wyo.

Phone 123

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FOR ALL OCCASIONS
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Contractor and Builder

Real Estate

Phone 625-J

Rock Springs, Wyo.

Mrs. Marko Militich has been a patient at the Wyoming General Hospital for some little time.

Mr. and Mrs. Dan Miller have a new baby boy, fair, fat and unbreakable.

Mrs. J. Johnston and Mrs. Chauncey Murray entertained the First Aid Club at an afternoon of sewing, chat and good times on Friday afternoon, January 6th.

Mrs. James Sellers (nee Mildred Hoback) was the honoree of a linen shower arranged by the Woman's Club at the Teacherage on the evening of January 17th.

Winton

The Winton Band had the pleasure of serenading the community at Dines on New Year's Eve, playing to an enthused audience. "The Wintonians" (youthful orchestra here) also made its debut at Dines.

The teachers have returned from their respective homes after enjoying two weeks' vacation.

Tom (Safety) Gibson is spending a few days here.

Messrs. Hans Madsen, Fred McCurtain, Lawrence Whitworth and C. H. Carlson attended the Scoutmaster School at Rock Springs, January 13, 14 and 15th.

Scotty Spence spent a few days at home during the month, enjoying or otherwise—a cold.

Mrs. George Herd is reported on the sick list this month.

Mr. and Mrs. Ben Butler entertained the Evening 500 Club. A most enjoyable time was had by all those present.

"Pat" Swanson became a member of the "Sick List" during the past month.

New arrivals in the camp during the past month are: Mr. and Mrs. Wm. Smith and Mrs. Leonard Fisher and family from Rock Springs; Mrs. P. A. Courtney and son from Powell, Wyo. Mr. Courtney located here about a month ago.

Mrs. John Baird has recovered from her recent illness.

Quite a number of Winton people attended the "Messiah," which was sponsored by the Congregational Church at Rock Springs Sunday, January 8th. Our Howard Johnson was one of the soloists.

Easter bonnets are already in vogue. How about it, Doc?

Miss Genevieve Dodds entertained a large number of her girl friends at a birthday party on Saturday afternoon, January 7th. Miss Genevieve is now seven years old, and was a gracious little hostess.

Owing to the illness of several members of the Community Council, the election of officers was postponed until the next regular meeting, which will be February 6th.

Mr. Frank Baxter, our very congenial butcher, is going to shake the dust of Winton from his feet. Mr. Baxter received a very splendid offer from Butte, Mont., which he has accepted. He expects to leave this month for Ogden, where his family is located, and from there they will move to Butte. The community extends its best wishes to the Baxters in their new venture.

Mrs. Earl Dupont and family have moved to Reliance, in order to be closer to Mr. Dupont, who is at the hospital recovering from injuries which he received here in December.

The annual "Bobby" Burns celebration was held here at Winton on January 28th. Some good local talent was obtained to take part in the program, and together with the Band and the Wintonians an enjoyable evening was spent. Dancing followed the concert.

Mr. Bob Slaughter had the misfortune of breaking his ankle when he slipped on the ice on January 11th. Mr. Slaughter is recovering at the Wyoming General Hospital.

Mr. Winston Funk is laid up with a badly bruised foot, received while at work on January 12th.

"Old Kate," known to all the children and to most

THE MOST
IN VALUE

THE BEST
IN QUALITY

Thrifty Shoppers Know—

Unquestionably the Best Values are to be Found at this Helpful Store

With the ushering in of a new season comes the need of many new things for the home and for the family. Whatever your requirements may be, you can surely find it in our bright new stock of spring merchandise and at prices that reflect thrift.

Carefully selecting only the best qualities that will give satisfactory service
—choosing only the most desirable styles and presenting them at fairest possible prices—adds constantly to our growing list of pleased customers.

SILK AND LISLE SOX

An exceptionally new shipment of novelty check sox, perfect fitting and guaranteed fast color. Ten different color combinations, all with double reinforced toe and heel.

SEMI-STIFF COLLAR SHIRTS

Master Craft collar shirts are made of newly discovered starch-resisting fabric of high tensile strength. Starching in the regular way produces a beautiful flexible finish, and the collars do not crease or buckle.

Washington Union Coal Company Store
TONO, WASH.

of the older residents of Winton, succumbed to old age last month, despite the valiant efforts of "Doctor" Finch to keep "The Old Gray Mare" going for a few more years.

Hanna

Mrs. Andrew Spence (nee Vendla Huhtala) of Winton, Wyoming, who was married during December, was the incentive of a miscellaneous shower given by Mrs. John Huhtala on December 27. Mrs. Spence enjoyed the Christmas holidays here with her mother, Mrs. Ida Huhtala, and returned to her school in Winton where she will finish teaching the term out.

Mr. and Mrs. Roy Cummings have adopted a baby boy. The little man has been named John Bliss.

The sympathy of the community is extended to Messrs. S. D. Briggs, Joe Briggs and W. A. Briggs in the death of their mother, Mrs. Anna Briggs, at Evanston, Wyoming, on December 29th.

Mrs. O. C. Buehler and daughter, Margaret, and niece, Dorothy Benedict, spent a few days in Denver after the holidays.

Mr. and Mrs. Jas. Easton of Walsenburg, Colorado, spent a few days in Hanna after attending the funeral of Mrs. Easton's mother, Mrs. Anna Briggs, at Rock Springs, Wyo.

Mr. and Mrs. O. G. Sharrer and son of Superior spent New Year's day with Mr. and Mrs. J. R. Mann and family.

Mrs. L. A. Rogers and children of Winton spent the Christmas holidays with Mr. and Mrs. Joe Lucas and family.

Mr. and Mrs. W. K. Burford and daughter of Brule, Nebraska, visited with Mrs. Raite and family during the Christmas holidays.

Mr. and Mrs. A. T. Clark are the proud parents of a baby boy born on January 5th.

Mrs. L. C. Burt and baby girl of Casper are the house guests of her parents, Mr. and Mrs. Joe Jackson.

The Methodist Sunday School held their Christmas pageant and tree at the church on December 22nd.

The Knights of Pythias dance on New Year's Eve was well attended and a good time enjoyed by all.

Miss Margaret Jackson and Wm. Rae surprised their friends by slipping quietly away and getting married the first of the month. Mrs. Rae is the daughter of Mr. and Mrs. J. A. Jackson of Hanna and Wm. Rae is the son of Mrs. Jas. Rae, also of Hanna. Congratulations are extended for a happy married life.

A social was given by the First Aid Club in the First Aid Hall on Saturday, January 7th. A very good time was reported by the large crowd that attended.

The funeral of Isaac Niemi, who died on December 29, was held on Sunday, January 1st, at the Finn Hall, and interment at the Hanna Cemetery. He was 67 years old at the time of his death and had lived in Hanna for many years. He is survived by a sister, Mrs. Alfred Polari of Hanna.

Miss Emily Campbell, who is employed at the office at the Company Store, underwent an operation for appendicitis at the Hanna Hospital and is getting along nicely.



Little Doreen Talo of Hanna takes her grandmother, Mrs. Gus Ojala, out in the yard to show her some new steps.

The New VICTORY

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36 Points of Superiority

Coupe	- - -	\$1,045.00
Sedan	- - -	1,095.00
Brougham	- - -	1,095.00

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McCURTAIN Motor Company

Phone 601

ROCK SPRINGS,

WYOMING

Superior

Mrs. Harry Wylam and son Roy returned from Washington for the holidays.

Harry Armstrong of Rock Springs is working in The Union Pacific Coal Company Store.

Miss Hannah Overy and Mr. Arthur Pritchard were married in Rock Springs on December 17th. The community extends congratulations.

Miss Catherine Moser and Miss Vella Wylam were home from Greeley to spend the holidays with relatives. Miss Doris Robinson was also home from Laramie enjoying a visit with her parents and relatives.

Mr. and Mrs. W. B. Clark spent Christmas in Evanston visiting relatives.

Mr. and Mrs. J. M. McLennan spent the holidays with Mr. and Mrs. Thomas Butler in Hanna.

Mrs. O. G. Sharrer visited with relatives in Hanna during the month. Mr. Sharrer spent some time in Denver on company business.

Frank Whitetree was on the sick list during the first week of January.

Mrs. Griff Powell is a patient at the Wyoming General Hospital.

Mrs. Ben Caine entertained her bridge club on January 5th. Prize winners were Mrs. Pat O'Connell, Mrs. Rud Robinson and Mrs. Robert Sanders. Lovely refreshments were served.

Cumberland

John McIntosh, Vernessa Purdy, Harry Armstrong and Mr. and Mrs. James Hunter were Christmas visitors.

Mr. and Mrs. Wright Walker spent Christmas in Rock Springs.

Mr. and Mrs. Lyman Welch and daughter spent New

Year's Day with Mr. and Mrs. Matthew Morrow.

A daughter was born to Mr. and Mrs. Walter Walsh December 27th.

Those entertaining the Evening Club were Mrs. Wm. McIntosh, Mrs. Wright Walker, Mrs. Nick Sutler and Mrs. John Georgis.

Mrs. W. W. Williams and son Howard have been visiting with the former's daughters, Mrs. James Reese and Mrs. Seth Ackerlund.

The Relief Society gave a dance and party in No. 1 Hall, January 13th. The affair was in honor of the release of Bishop George F. Wilde from presiding bishop and acceptance of same position by P. A. Young, Cumberland bandmaster. A happy and interesting time was enjoyed.

Love Cannot Be Controlled

Love cannot be controlled or bound

To serve a mortal's will,

And though oft crushed into the ground,

Its spirit striveth still.

No grief, nor any bitter blow

Can call it from the heart,

For Love remains, in time of woe

As firm as at the start.

It flourishes through everything,

And failure and defeat

Fail utterly at conquering

Its blissful passion sweet.

Forever it must hold a sway

Determined, firm and bold,

And press triumphant on its way,

Unchecked and uncontrolled.

—H. A. Edwards.

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is the electric bill
for the average home

8 minutes work

a day by the average
wage-earner pays it.

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Rock Springs, Wyo.



I am The Office Duster

And I'd like to know
what sort of a warn-
ing bell the horseman,
who delivered the hosereel to
the fire so expeditiously, carried.

So the Scotch folk have been cele-
brating Bobby's birthday again. They're
gey quiet aboot it. I'm speerin' if
there's no something strange about that.

Play for grown people is recreation—
the renewal of life. For children it is
growth—the gaining of life. —Joseph Lee.

All hail, ye bicycling firemen!

Worth our while to read again our favorite book on
Lincoln. More and More books are being written about
him.

If you want to know all about Bobby Burns, ask Mr.
Carl Carlson of Winton to tell you.

The Hanna Christmas tree was a thing of joy and
gorgeousness. We tried to count the lights and couldn't.
It was so dazzling our sight petered out.

We recommend the Wintonians, Rudolph Menghini's
Junior Orchestra, to the interest of everybody.

Oh dear, Scotch stories are getting so common we're
not so sure we want to use them any more. We're—well,
we're not Swedish.

The welfare of the children of our nation is our joint
responsibility. I believe that the attitude of a nation
toward child welfare will soon become the test of civili-
zation. —Herbert Hoover.

You may have all heard the story of the three men
working on stone and the passer-by who stopped at the
side of the first man and asked: "What are you making?"
The answer was: "I am making small rocks out of big
ones." Of the second man the same question was asked
and he answered: "I am making \$5 a day and it isn't
enough." But when the question was asked of the third
man, he looked up from the piece of granite on which he
was working and said: "I am building a cathedral."

The Colorado Wholesale Drug Company

1437 Lawrence St.

DENVER, COLO.

North Side State Bank

Rock Springs, Wyoming

STATEMENT OF CONDITION

December 31, 1927

RESOURCES

Loans and Discounts.....	\$1,207,233.03
Bonds, Warrants and Securities.....	380,141.47
Banking House	100,000.00
Furniture and Fixtures.....	16,000.00
Other Real Estate.....	16,043.29
Cash Reserve	400,830.71
Total.....	\$2,120,248.50

LIABILITIES

Capital	\$ 75,000.00
Surplus	75,000.00
Undivided Profits	17,394.41
Dividend	7,500.00
Total.....	\$2,120,248.50

"The People's Bank"

"Teach economy; that is one of the first virtues. It begins with saving money."

—Abraham Lincoln.

Start now!
Open an account

with the

First Security Bank

of

ROCK SPRINGS, WYO.

Cudahy's
PURITAN



Bacon
Hams
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Representative
Rock Springs, Wyoming

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THE CUDAHY PACKING CO.
of Nebraska
NORTH SALT LAKE, UTAH

Supreme Brands Cookies, Crackers and Cakes

THERE'S genuine pride in having the best—that's why the West is so strong for Supreme Brand oven products. Folks who enjoy good things to eat choose this delightful line after trying them all.

And here's the reason—made of the most select Western products, baked

by Westerners who know how, in a plant flooded with Western sunshine, "Supreme" brand quality satisfies Westerners as nothing else really can.

If you've never acquired the "Supreme" buying habit, try it now, for "Supreme" is a word to go BUY.

Real pleasure awaits you.

SUPREME



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America's Best Cigar for 5 cents

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Ask for

Underhill Overalls
and Work Shirts

Your dealer sells them

THE BAYLY-UNDERHILL MFG. CO.

CONDENSED STATEMENT OF THE CONDITION OF
The Rock Springs National Bank

Rock Springs, Wyoming

At the close of business December 31, 1927

RESOURCES		LIABILITIES	
Loans and Discounts	\$1,379,440.64	Capital Stock	\$ 100,000.00
U. S. Bond to secure circulation..	90,000.00	Surplus	200,000.00
Other Bonds and Securities.....	300,757.19	Undivided Profits	35,685.03
Banking House, Furniture and Fix- tures	123,945.50	Circulation	89,997.50
Other Real Estate Owned.....	4,463.04		
U. S. Bonds.....\$	643,277.53		
Cash in vault and due from banks and U. S. Treas- urer	\$1,040,028.40	DEPOSITS	3,156,299.86
	<u>\$3,581,982.39</u>		<u>\$3,581,982.39</u>

THE STATE OF WYOMING
 County of Sweetwater,

I, C. Elias, Cashier of the above-named Bank, do solemnly swear the above statement is true
 to the best of my knowledge and belief.
 (Signed)

C. ELIAS, Cashier.

Subscribed and sworn to before me this 5th day of January, 1928.

(SEAL)

AUDREY HARVEY, Notary Public.

CORRECT--Attest:

C. L. SPARKS
 W. H. GOTTSCHKE } Directors.
 J. W. HAY

*There is no mystery about
 coffee.*— The coffee markets are open to buy-
 ers from any part of the world. The
 roasters and packers of BLUE PINE COFFEE can, and
 do, buy the finest coffees that are grown. The coffees
 that make up the BLUE PINE blend are the final selection of the finest
 coffees grown in countries noted for their excellent coffees. There can be
 no better coffee than BLUE PINE.

You as a merchant can hand BLUE PINE COFFEE to your customers
 with the feeling that you are giving them the very best. You as a coffee
 drinker can buy BLUE PINE COFFEE with the full assurance that it will
 be fully satisfactory, that all the aroma that can come from coffee, that
 all the flavor that grows in the coffee bean will be found in the BLUE
 PINE Cup.

Prosperity ! All Aboard ●

THE Prosperity Special is thundering along through Southern Wyoming. It's traveling on a track of prospects that are brighter than for a long time.

There are no washouts or slippery rails in sight. It looks like a good straight piece of track ahead.

I We have arranged our stores to handle this increased prosperity by showing more merchandise of high quality at reasonable prices than ever before.

I

The
Union Pacific Coal Company
Stores

"Where your dollar is a big boy all the time"